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ABSTRACT

The 23 papers were written by staff and consultants of the Arts in Special Education Project of Pennsylvania, a program to provide assistance to educators in the development of appropriate quality arts programming for handicapped students. After two overview papers, the papers are grouped by category--art, dance, drama, and music. Papers have the following titles and authors: "What Is An Arts Program?" (B. Roehner); "Handicapping Conditions and Their Effect on the Child's Ability to Create" (C. Kunkle-Miller); "Art in Special Education" (S. Lyons); "Art and the IEP" (S. Aach); "Visual Arts Experiences for Socially Maladjusted/Emotionally Disturbed Children" (B. Chernin); "Art and Group Dynamics in the Classroom" (R. Hays); "Art--Many Options for Creative Activity" (C. Battaglini, N. Wert); "Group Development and Socialization Through Movement" (E. Samuelson); "Developmental Movement as a Tool for Teaching the Handicapped" (B. Carpenter); "Cognitive Development and Movement" (L. Thierry); "Creative Dance/Movement--In Search of Goals" (J. Quinn); "Movement--Some Ideas for Getting Started" (S. Bridges); "Creative Dance/Movement in Special Education--A Case in Point" (E. Tropea); "Drama/Expressive Play in the Special Education Classroom" (E. Lilley); "Dramatics--Center Stage in the Education of the Deaf" (R. Nowell); "Theatre Movement for the Blind and Visually Impaired--Two Summer Sessions" (F. Feighner); "Mine in Education--A Developmental Process" (L. Kearns, et al.); "Music--An Integrative Approach to learning for the Severely and Profoundly Retarded" (P. Boone); "Music and the Child with Specific Learning Disabilities" (C. Briggs); "The Musical Characteristics of Mildly and Moderately Retarded Children" (K. Bruscia); "Music and the Physically Disabled Child" (G. Karr); "The Emotionally Disturbed Child and Music" (P. Simpkins); and "Opportunities for Growth--Music in the Education of Sensory Impaired Students" (M. Ditson). (DB)

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READINGS: DEVELOPING ARTS PROGRAMS FOR HANDICAPPED STUDENTS

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LOLA H. KEARNS
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ARTS IN SPECIAL EDUCATION PROJECT OF PENNSYLVANIA

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INTRODUCTION

The Arts in Special Education Project of Pennsylvania, a program of the Pennsylvania Department of Education, provides assistance to educators in the development of appropriate, quality arts programming for handicapped students. Activities of the Project include: arts in-service workshops for teachers, administrators and parents; arts workshops, participatory arts festivals and professional performances for handicapped students; services and materials for arts curriculum development; and, a statewide communications network.

The Project is based on the belief that the arts are valuable in the education of all students—that a comprehensive arts program nurtures and develops the perceptual, intuitive, imaginative, sensory, physical, expressive and cognitive capacities of each child, handicapped and non-handicapped alike. The arts transcend handicapping conditions by their pervasive role in shaping students' thoughts, feelings and behaviors. Current research, evaluation and legislation support this premise.

It is further believed that a polished product or performance, while aesthetically appealing and desirable, is not the major goal of an arts education program. Rather, learning through the arts is based on an experiential process which involves students in the actions of perceiving, responding, understanding, creating, evaluating and developing skills.

This publication is yet another attempt to provide insights for the planning and implementation of arts programs for the handicapped. The readings presented herein were written by the Project's arts consultants and staff after much deliberation over what kinds of information would be most helpful to educators. It is hoped that these readings will reinforce and expand the Project's direct services to its participating educators and introduce a philosophical, conceptual and practical base for others.

Collectively, the readings present a wide variety of information intended to address questions and concerns of special education personnel, art and music specialists, physical education teachers, parents, and others interested in advancing the education of handicapped students. The editors have extracted some key statements from each article for the reader's perusal and have provided wide margins for personal notes and ideas.

We invite you to share in the vast experience of these authors, and to provide the special students in your charge arts experiences that will strengthen and guide them toward the achievement of their greatest potential.

LOLA H. KEARNS

MARY TAYLOR DITSON

OVERVIEW

WHAT IS AN ARTS PROGRAM?

by Bernice Gottschalk Roehner

... emphasizes the almost limitless possibilities for learning experiences provided by the arts through creative planning.

HANDICAPPING CONDITIONS AND THEIR EFFECT ON THE CHILD'S ABILITY TO CREATE

by Carole Kunkle-Miller

... speaks to the benefits derived from arts education for handicapped children; defines each exceptionality; provides many helpful suggestions for teaching methods and adaptations.

WHAT IS AN ARTS PROGRAM?

BERNICE GOTTSCHALK ROEHNER

BERNICE GOTTSCHALK ROEHNER, Ph.D., formerly a public school teacher, college teacher and Arts in Education Adviser for the Pennsylvania Department of Education, has designed arts programs for young children, youth, young adults and senior citizens, many of whom were handicapped. Dr. Roehner is a consultant for the Arts in Special Education Project, Arts and the Aging and Arts in Religion.

"What," refers to the nature and characteristics of an indefinitely large number of skills, objects and materials, tools and instruments, places, learning and artistic processes and people.

No idea, no technique, no material is removed from the list or declared inappropriate for students until it is studied from every possible angle.

Despite the brevity and simplicity of the question, "What is an arts program?," the answer is complex. Its complexity is not insurmountable, however. One way to reach a viable answer is to begin by defining each word in the question—to translate each word so that the ramifications of its inclusiveness are known and interpreted. Once the definitions are clear, the question can be restated or interpreted in the context of learning experiences for handicapped students. The process is rather like looking at the question as though it were written in a foreign language.

"What—an interrogative referring to the nature or identity of an object or matter (sometimes a person. . .) in question" (Webster's New Collegiate Dictionary)—has great value and consequence. It refers to the nature and characteristics of an indefinitely large number of skills, objects and materials, tools and instruments, places, learning and artistic processes and people. "What" is a listing, a conglomerate of all those possible activities that originate in the arts and that have some probable significance in the life and learning of handicapped children. Such a list must include adaptations to tools, instruments and techniques. Additions to the list are made as a result of exploration and experimentation. No idea, no technique, no material is removed from the list or declared inappropriate for students until it is studied from every possible angle. The list cannot get too long; in fact, there is a danger that it will be too short for making program decisions. In general, the greater the number of possibilities for arts activities, the greater chance there is for finding and charting an appropriate course of action for any given person or group.

Compiling the "what" and defining it in terms of the handicapped student requires people who have some very special characteristics. Shella Bridges in her article names flexibility, attentiveness and enthusiasm as three necessary traits. Emily Samuelson specifies sensitivity and Edward Lilley projects the idea of the teacher as a keen observer and one who learns from watching children at play. Whether mentioned specifically or implied, every article in this publication attests to the importance of a teacher/leader as one who is an observer of students' capabilities, as one who is an eclectic researcher of methods, materials and human behavior and as one who consistently, creatively interprets, interrelates and adapts processes, tools, and environments in order to provide needed learning experiences for handicapped students.

In creating vital learning experiences, the creative teacher discounts stereotypes and pushes away boundaries that have been formed by them. Two such examples in this publication are presented by Richard Nowell and Forest Feighner. Other examples appear in Susan Aach's article about art and the blind and in Gwenn Kair's description of music and orthopedically and chronically ill children. Again and again, authors and consultants, for this publication and others, urge people who work with handicapped students to exercise their imaginations and interpretive abilities—to see a caution sign when a gimmick-ridden publication of activities for the handicapped appears. Such activities are of questionable significance in the handicapped student's total learning experience because they are highly stereotyped and highly directed. There is little, if any, allowance for the student's growth of imagination and power of expression. They frequently lead to great frustration because the students' products bear little resemblance to the flashy gimmick.

"What," then, must be translated as not only a listing of possible materials, processes, skills and techniques, tools or equipment and environments, but also

There is a certain element of currency, appropriateness-for-the-time that must be present.

The substance of an arts program comes from three sources.

Students can learn to perceive their world and to express their feelings and ideas by manipulating materials, tools and composition.

Artists exemplify a learning and working method.

as people—caring people who interpret creatively and subjectively the information available to them from numerous sources, including the handicapped students themselves.

"Is—third person singular, present indicative of the verb, be" (Webster's)—subjectively relates to the individualization that is necessary in order to attend the needs of handicapped students. Because those needs may vary from day to day, even hour to hour, for any particular student, the present tense of the verb, be, must be part of the mind-set of anyone approaching the subject of arts programming. There is a certain element of currency, appropriateness-for-the-time that must be present. This element makes it possible to change or adapt as students' responses or needs demand. If the student is to be all that it is possible for him or her to be, the learning experience has to be designed to accommodate what he or she is now. This is not to say that long range objectives are not necessary. They are of utmost importance, but no one attains a goal except by increments. Many handicapping conditions cause those increments to appear as minimal attainments; or, in the context of a given skill for a particular child, all manipulations or working techniques may require study deliberately and/or repetitively.

"Is" when interpreted into the context of learning experiences for handicapped students, connotes NOW. It also implies substance. It cannot be if it is something ephemeral, something that just floats into the classroom to spontaneously relieve tension on a stormy or warm Friday afternoon. This substance comes from three sources. One source is the ability of human beings to learn through whatever senses are available to them and to use sensory information in the creation of new or enlarged meanings. The second source is a need of every human being to express ideas, feelings and responses. These sources are enlivened and enriched through learning experiences directly associated with the arts, the third source. The substance "is," it does exist; it has life.

"Art—human contrivance or ingenuity as a discipline or as an instrument of knowledge; systematic application of knowledge or skill; conception and execution are governed by imagination" (Webster's)—is substantive in both form and process. On the one hand, the arts are those human endeavors that are known as art, dance, drama, filmmaking and photography, music and writing. On the other hand, the arts are also a whole battery of working methods or styles and constantly developing skills. In either case, it is necessary to break the boundaries of tradition, if the arts are to become learning experiences for the handicapped.

Art, for instance, cannot be defined as the products of painters or sculptors—as in Fine Arts—but rather, it must be allowed to encompass a wide range of activities through which students can learn to perceive their world and to express their feelings and ideas by manipulating materials, tools and composition. For instance, an activity that is designed to allow students to feel many different textures and to learn that each texture may elicit a different emotional response, may lead eventually to a collage. To emphasize the collage as the objective of the experience is placing too narrow or traditional a definition on the arts. The arts embody a way of working and learning. To have perceived the differences in textures and to realize their inherent capabilities to engender feelings is the more important objective.

In fact, it is the learning process exemplified by artists—be they painters, weavers, composers, dancers, actors, playwrights, poets or mimists—that captures the imagination of the person who works with the handicapped. The focus is no longer on the production or performance of particular art works, but rather on the ways the students are learning. If they behave the way artists do, they are perceiving and storing whatever sensory information they can garner. They are forming perceptions about their world by noting their own responses to what they perceive. They are recalling, ordering and giving new meanings to their perceptions through creative expression. They are learning to control their actions, their materials, their thoughts and feelings about themselves and their relationships to a world of people, things and societal pressures. The process is continuous, consistent and satisfying to both students and teachers. The children need not emulate a chorus line or ballet star in order to discover how expressive their movements can be when they are controlled.

Teachers can draw from every art form activities that help students to be better perceivers and aware responders who express their feelings and ideas through various artistic techniques. Picking up on an idea from Susan Aach, a blind child working with finger paint may express a feeling of being loved by making magnificent circles in finger paint. The product may not be aesthetically pleasing but the kinesthetic treatment of the soft paint with circular motions indicates that the student perceives something of the emotion, love, and is responding to it and to the medium. It is the act of expressing that is important, not the product. For another student with another type of handicap, the same activity may be used with another objective, perhaps one that is more closely related to the aesthetic qualities of the product. In still other instances, entire units of work may be provided in which the student participates in a series of perceptual tasks. And so, an arts program is built!

"Program—a prospectus, a syllabus; an outline of the order to be pursued, or the subjects embraced" (Webster's)—is the most important word in the question. There is no ambiguity or ambivalence about this word. Any program is a planned series of learning experiences ordered in such a way as to attain desired goals. It entails decision making about what is presented to whom, by whom, for what reason(s), when, where, for how long, how often and what levels of accomplishment may be expected. An arts program requires the same deliberate attention as any academic or therapeutic program and, in fact, may contain elements that will enrich and make meaningful certain aspects of those programs.

There are two principles which guide the art of program planning. One principle pertains to choosing what is to be included and the other pertains to the dynamism of the program. In the first instance, although every medium and every technique of every art form are eligible for inclusion in an arts program, they need not all be included. Imaginative thought and experimentation by the teacher, appropriateness of certain skills or activities to the developmental growth and emotional well-being of the student and, to a degree, availability of materials or space all have bearing upon whether or not a particular arts activity is to be included. Secondly, the arts program is to be recorded, planned in advance, with evaluative techniques of both student growth and teacher performance considered. Despite such pre-arrangement, the program need not be passive. It is not chiseled in stone. It can be dynamic, active, full of life. The evaluation techniques mentioned in conjunction with the first principle make this dynamism possible.

Some teachers have found that if they arrange their program components in a card file, they can shift, insert, and eliminate various activities more easily. On the front of each card, they inscribe the objective(s), activity, materials and other such pertinent information. On the back of the card, they record evaluative information. Other teachers have found working in loose-leaf notebooks or on pages with wide margins helpful to them in creating a recording system that engenders creative and imaginative use of their plans.

Whatever the method of recording is, the planned program is of utmost importance. In the day-to-day work with students, there is a tendency to become so involved with classroom management, episodic events and miniscule increments of learning that long range goals—even those of a single unit of work—can become lost or, at least, foggy. The recorded, planned program should be looked at frequently and evaluation of the viability and effectiveness of its components studied.

WHAT IS AN ARTS PROGRAM?

In the context of learning experiences for handicapped students, an arts program derives its action from the arts. Such action is appropriate according to the individual needs of the students. These needs may derive from physical, emotional or intellectual sources. The arts program is dynamic. It is a planned series of experiences that have definite objectives and definite evaluative techniques. An arts program is as imaginative as the planner is.

An arts program is.

Two principles guide the art of program planning—appropriateness and dynamism.

Whatever the method of recording is, the planned program is of utmost importance.

HANDICAPPING CONDITIONS AND THEIR EFFECT ON THE CHILD'S ABILITY TO CREATE

CAROLE KUNKLE-MILLER

CAROLE KUNKLE-MILLER is a Registered Art Therapist at The John Merck Program, Western Psychiatric Institute and Clinic and a faculty member at Carlow College, Pittsburgh. She also provides arts in-service workshops for teachers of the handicapped and demonstration lessons with a variety of exceptional students.

Stimulation of creativity in children begins with a teacher who is a creative role model.

This paper is intended specifically for those teachers and administrators who have a strong background in regular education, but little experience in working with handicapped students. The material is divided into the following topics: Visual Impairments; Auditory Impairments; Physical Handicaps; Mental Retardation; and Learning Disabilities. Each handicapping condition is first defined, then discussed with regard to stimulating creative expression in children with this particular handicap. Several specific suggestions and adaptations are given, but the focus is on describing the general approach which will be most effective. Broadly speaking, teachers of handicapped children must learn to use themselves expressively, especially when stimulating creativity. They must communicate through their voices, gestures and movement a commitment to play, to experiment, to risk trying new ideas. In addition, teachers must be open to the use of various expressive modalities, and be willing to make adaptations in the materials and activities, so that the individual child may be in as much control as possible (Rubin, 1978). Quite often, stimulation of creativity in children begins with a teacher who is a creative role model. An adult who communicates the feeling that learning can take place through the arts, and that there is no such thing as "failure" in creative expression is a significant catalyst of creativity in the handicapped child.

VISUAL IMPAIRMENTS

DEFINITION The National Society for the Prevention of Blindness Fact Book (1966) defines blindness and partial vision as follows:

Blindness is generally defined in the United States as visual acuity for distance vision of 20/200 or less in the better eye, with best correction; or visual acuity of more than 20/200 if the widest diameter of field of vision subtends an angle no greater than 20 degrees. The partially seeing are defined as persons with a visual acuity greater than 20/200 but not greater than 20/70 in the better eye with correction. (p. 10)

The above stated medical definition is based on ophthalmic measurements, but research findings reported by Kirk (1972) state that children with the same visual acuity or same degree of visual impairment may have very different visual abilities with regard to learning. The label of legal blindness as resulting from visual acuity tests does not predict the mode of learning which will be most effective for the child. Therefore, the terminology for educational purposes is the following: "The Visually Impaired refers to those who can learn to read print. The blind are defined as those who cannot learn print; but who need instruction in braille." (Kirk, p. 293)

A growing trend in school systems has been to encourage those children who are considered legally blind to use whatever residual vision is available to them. Lindsay (1972) states that, "Among children classified as blind, not all are entirely without sight, but many have restricted or variable vision. . . This may still enable them to find their way about and to participate in activities that require the use of rather general vision only." (p. 14) The partially sighted are able to use learning methods based on large print as well as other visual aids and specialized materials made possible by advances in technology (e.g., the Optacon device).

The levels of vision demonstrated by children who are labeled as blind or partially sighted varies considerably from one child to the next. An in-depth

narrative regarding the causes of blindness and their effect on vision is not possible here, but readers may refer to the chapter on visual impairments in *Is My Baby All Right?* by Appgar and Beck (1974) for further information. For example, there are significant differences between the functioning vision of a blind child with peripheral vision only, and a blind child with light perception. It is important for arts educators to understand the individual differences that exist among visually handicapped children, so that their educational programming may be adjusted accordingly.

Another source of variability among visually handicapped children is the degree of intellectual ability. Some causes of blindness (e.g., Rubella) often result in mental retardation, while other causes, such as accidents or retrolental fibroplasia (the administration of too much oxygen to infants born prematurely) do not effect the child's intelligence. In a given classroom of visually handicapped children, a teacher may be faced with providing appropriate education for a totally blind child of normal or even gifted intelligence as well as a partially sighted child who is moderately retarded. Educators specializing in the visually handicapped are encountering fewer children who have a solitary handicap of blindness, and more who are multiply handicapped. Wolf and Anderson (1969) categorize the multiply handicapped blind child in the following manner: the deaf-blind child, the blind-speech defective child, the mentally retarded blind child, blind children with physical disabilities and blind children with emotional problems. Considering the diversity of abilities, the need for individualized educational planning for each handicapped child is apparent.

CREATIVE EDUCATION OF THE VISUALLY IMPAIRED The world of learning is primarily a visual one, as reported by Anderson (1978) and Kirk (1972) who state that 85% of information that is learned is through vision. Anderson (1978) continues commenting that, "The blind child must shift to learning via the other sensory channels of feeling, hearing and body sensation." The visually handicapped must develop these other sensory avenues as fully as possible, and the arts are one of the most effective means of accomplishing this. Appell (1979) supports this view, stating: "For children with visual impairments who suffer from restricted sensory input, the arts can offer rich and stimulating experiences that develop touching and listening skills to improve total functioning."

Blind children are no less creative than normal children, but their creativity must be both stimulated and perceived in a different way. Blind children's art work may not be visually appealing to their teachers, parents, or other sighted adults, but it will be pleasurable, meaningful and possibly tactually appealing to the children. For example, after completing printmaking of foam trays, one totally blind child asked his teacher if he could keep the tray which is usually discarded. She was surprised that the child was not interested in keeping the final art product itself—the print. Upon further reflection, it made sense that the child would want to keep the printing plate which was more tactile, and therefore more meaningful. Arts experiences which are tactually stimulating can frequently facilitate this unique non-visual form of creativity.

Teachers of visually handicapped children frequently shy away from art activities because of the inherent "messiness" when children cannot see what they are working on, as well as the problem of adapting art lessons to the abilities of blind children. Children may need help with messy materials through slowly introducing more fluid, and therefore less controllable media. Placing paint in a container that is weighted so that it cannot be accidentally knocked over, as well as storing different colors of paint in different sized containers will also help to prevent messiness. Clay is one medium which may be rejected by blind children because of a repulsive response to the tactile sensation. There are several types of clay available, from oil-based plasticine to water-based stoneware clay, to flour and salt dough clay. Frequently, blind children have a more positive response to dough clay as it has a "cleaner" texture. Providing students with a boundary, such as a shallow box or cafeteria tray, when using messy materials will help students to have more successful experiences.

The art room itself should be designed with materials and furniture in consistent places. Anderson (1978) states that: "The art environment should allow the child maximum mobility and enable his rapid orientation to materials and their

Blind children are no less creative than normal children, but their creativity must be both stimulated and perceived in a different way.

Arts experiences which are tactually stimulating can frequently facilitate a unique non-visual form of creativity.

Providing students with a boundary, such as a shallow box or cafeteria tray, when using messy materials will help students to have more successful experiences.

location." The purpose of this is to allow the visually handicapped child to function as independently as possible in the art room.

Creative arts experiences in the movement, music and drama realm are also very beneficial to the visually impaired child. While it is not true that blind children necessarily have a natural talent in music, it is true that this potential can be developed, especially since this type of child usually has a much keener awareness of sound. Furthermore, experiences in movement are greatly needed as visually impaired children frequently have motor delays, poor body awareness and difficulties with spatial relationships. Lindsay (1972) states that:

Creative activities must help (the visually impaired) develop maximum sensitivity in the hands and fingers, besides a better coordination of body movement, that they may derive the fullest experience from the immediate environment, and by so doing, extend their knowledge of the world beyond the visual barriers. (p. 19)

AUDITORY IMPAIRMENTS

DEFINITION The Committee on Nomenclature of the Conference of Executives of American Schools for The Deaf (1938) have classified hearing impairments as follows:

1. The Deaf: Those in whom the sense of hearing is non-functional for the ordinary purposes of life. This general group is made up of two distinct classes based entirely on the time the loss of hearing occurred. These include:
 - a. The congenitally deaf—those who were born deaf
 - b. The adventitiously deaf—those who were born with normal hearing but in whom the sense of hearing became non-functional later through illness or accident
2. The hard of hearing: Those in whom the sense of hearing, although defective, is functional with or without a hearing aid. (p. 2)

Lindsay (1972) states that it is not always possible to determine the cause of deafness, but that it is often due to hereditary factors where congenital defects damage the auditory systems of the developing embryo. Permanent damage to a fetus can be caused by influenza, German measles (Rubella) or syphilis contracted by the mother during pregnancy. Auditory handicaps acquired later may be the result of brain damage at birth, jaundice, meningitis, encephalitis, neglected middle ear infections and complications related to childhood illnesses. Regardless of the cause of the auditory impairment, the most important factor educationally, is the time of onset of the handicap. Kirk (1972) states that, "If an individual has already acquired speech before the loss of hearing, the whole communication and educational process is different from that used with persons who have never known speech or language." (p. 240) The fact that speech and language are so severely affected in deaf or hard of hearing children creates social adjustment problems because they have difficulty in social interaction. Kirk states that the amount of difficulty a child has with social adjustment and educational progress will vary with the degree of the hearing loss, but also with the child's intelligence, emotional adjustment and neurological make-up.

CREATIVE EDUCATION FOR THE AUDITORILY IMPAIRED Anderson (1978) discusses the means by which teachers can communicate with and educate the deaf. The current method of communication is a "combination of speech reading, sign language, and finger spelling." If the teacher does not have these manual communication skills, he or she can use themselves expressively by communicating through gestures, facial expressions, visual demonstrations and written explanations. Of primary importance, is the need for the teacher to develop eye contact with the deaf child. Concept development for hearing impaired students is very difficult, especially since abstract concepts cannot be demonstrated or acted out. Anderson (1978) stresses that the curriculum for auditorily impaired children should include "many concrete experiences and demonstrations and dramatizations. . . also a heavy reliance on visual learning and imitation." Since hearing impaired children experience communication disorders, the non-verbal "language" of the arts (art, movement, drama and music) speaks to their need to communicate with others and with themselves. The child with a hearing disability learns so readily through imitation that such art

Since hearing impaired children experience communication disorders, the non-verbal "language" of the arts (art, movement, drama and music) speaks to their need to communicate with others and with themselves.

forms as pantomime or dance build these imitative skills. Lindsay (1972) states that: "Creative activity can give pupils a means to express mood or areas of anxiety and help them come to terms with life situations, something which is particularly important for those who lack speech." For example, if a deaf child cannot find words or signs to express a feeling he/she may be encouraged to draw or perhaps dramatize that emotion. Furthermore, Lindsay comments that "when children are handicapped in the basic means of communication, there is a real need for self-expression, particularly through art and craft activities in which they can perform on equal terms with others." Anderson supports this, by stating that the artistic abilities of hard of hearing children will be similar to and as typical as normal children who are the same age and class level. The fact that the hearing impaired child has the same creative potential as the normal child certainly lends support for the mainstreaming of hearing impaired children in art classes.

Deaf children usually have a less developed concept of rhythm due to their lack of experience with sound. Lindsay (1972) states that an emphasis on rhythm experiences in the classroom not only increases their sensory awareness, but it also increases coordination of body movement. Such rhythmic experiences could occur through the creative arts—from the repetitive motion of printmaking with objects, to the pounding of a large bass drum, to moving with another in rhythmical union. Once rhythm is developed, the child may then learn to associate rhythm with the patterns and cadence of speech. The end result of this may be a general improvement in the child's speech.

In conclusion, Appeli (1979) discusses the value of providing arts experiences to hearing impaired youngsters whose handicaps often lead to defects in self-confidence, social adjustment and emotional stability, the arts can be an extremely important communication tool—"a vehicle for improving their interaction with a hearing world" (p. 74).

PHYSICAL HANDICAPS

DEFINITION Children who are physically handicapped can be classified into three categories: 1) neurologically impaired; 2) orthopedically impaired; and 3) children with other health problems. Kirk (1972) defines the neurologically impaired as: "Those children whose handicapping condition is due to lack of complete development or injury to the central nervous system." The most common type of neurological disability is cerebral palsy which is a "motor disability caused by a brain dysfunction." The United Cerebral Palsy Research and Educational Foundation (1958) defines cerebral palsy as follows:

Cerebral palsy embraces the clinical picture created by injury to the brain, in which one of the components is motor disturbance. Thus cerebral palsy may be described as a group of conditions, usually originating in childhood, characterized by paralysis, weakness, incoordination or any other aberration of motor function caused by pathology of the motor control center of the brain. In addition to such motor dysfunction, cerebral palsy may include learning difficulties, psychological problems, sensory defects, convulsive and behavioral disorders of organic origin.

Therefore, cerebral palsy encompasses not only neuromotor problems, but also psychological disabilities of perception, learning, emotions, and speech (Kirk, 1972). In describing cerebral palsy, the parts of the body affected are usually identified. In monoplegia, only one limb is impaired. Hemiplegia refers to one side of the body (both arm and leg) being affected. In triplegia, three limbs are impaired, usually two legs and one arm. Paraplegia refers to paralysis or weakness in the legs only. Quadriplegia is used to indicate that all four limbs are affected. When describing a given child's disability, the degree of involvement is also stated as ranging from mild to severe.

Cerebral paled individuals are also classified according to the type of neuromuscular involvement which they have. Spastics are the largest group of the cerebral palsied, comprising 40-60% of the total (Kirk, 1972). In children with the spastic type of cerebral palsy, "The limb muscle is tight and with sudden attempted movement or stretching, the muscle contracts strongly" (Bleck and Nagel, 1975). The child moves in a jerky, uncontrolled manner. As the child grows older, the spastic muscle becomes shorter, resulting in deformities of the limbs.

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pelvis and spine. Spasticity can affect one or more of the limbs, but hemiplegia is usually the most common. The next type of cerebral palsy is the athetoid type. This form of cerebral palsy is characterized by "jerky, irregular, twisting movements. . . children with athetosis walk in a lurching, writhing and stumbly manner" (Kirk, 1972, p. 354). As the athetoid child attempts a conscious movement or effort, uncontrollable, purposeless gestures and movements increase. The third type is ataxia which is "a lack of balance sensation, a lack of position sense in space, and uncoordinated movement. Such children walk as if they were sailors on a rolling ship at sea, feet apart and weaving of the trunk with arms akimbo to balance" (Bleck and Nagel, 1975). The cerebral dysfunction which causes cerebral palsy may also cause the following handicaps, either alone or in combination: mental retardation, visual impairments, hearing impairments, speech defects and perceptual disorders.

Another neurological disorder which is common among handicapped children is epilepsy. In grand mal epilepsy, there is usually a warning (called an aura) that a seizure is coming. During the aura, the person may be aware of unusual odors, may see strange colors or visual phenomena, may hear strange sounds, or may have an internal feeling (sometimes a feeling of nausea precedes a seizure). The muscles of the person stiffen, becoming very rigid during the seizure. Following this is a jerking, uncontrollable, convulsive state, known as the clonus stage. The seizure lasts for 3-4 minutes, then the person relaxes and falls asleep. Grand mal seizures can be controlled by medication, but a side effect is that it also slows down the child's thinking processes and other responses (Anderson, 1978).

Whenever a child has a seizure, it is important that the child be placed on his/her side and be protected from injuring the head or other parts of the body. It is not advisable to attempt to prevent the child from swallowing his/her tongue by placing something in the child's mouth while he/she is convulsing. If this is done, the chance is great that the child will choke and this is much more dangerous than the seizure itself. The child coming out of a seizure may need some reassurance that he/she is not hurt, as well as being given time to rest. Other children in the room may exhibit fear or confusion, therefore they may need a brief explanation of the problem.

A second type of seizure, petit mal, is characterized by a momentary loss of consciousness, which may be manifested as a blank stare, blinking of the eyes, nod of the head, or the dropping of an object. This type of seizure begins and ends suddenly, lasting only a few seconds. The child usually has no recollection that the seizure has taken place.

In addition to neurological impairments, the second category of physical handicaps is orthopedical. The orthopedically handicapped child is usually born with "defects of nerves, muscles or bones, the result either of inheritance or of a defect in development during the pre-natal period. . . defects may include clubbed feet or hands, the absence of an arm or arms, defects in the legs, neck or hips and spina bifida" (Kirk, 1972, p. 367). Other conditions which occur later in life are the following: polio, hemophilia, arthritis, and muscular dystrophy.

The third category of physical handicaps are those children with special health problems which render them weak or inactive. Such problems include rheumatic fever and congenital heart defect, diabetes, nephrosis, respiratory disorders, cystic fibrosis, asthma and tuberculosis. Children with these types of physical disorders generally need special consideration from their teachers. For a more complete discussion of physically handicapping conditions, refer to: A Teacher's Guide to Management of Physically Handicapped Students, by June B. Mullins, Springfield, Illinois, Thomas Publishing Co., 1979. An additional resource is: Physically Handicapped Children, A Medical Atlas for Teachers, New York, Grune and Stratton, 1975.

CREATIVE EDUCATION OF THE PHYSICALLY HANDICAPPED Kirk (1972) states that physically handicapped children "comprise heterogeneous groups with varying disabilities, each a unique problem which limits the effectiveness with which a child can cope with the academic, social and emotional expectations of the school and community" (p. 349). Consequently, the educational programming for these children must be individually tailored to their specific needs. Anderson (1978) encourages providing a variety of vicarious and first

hand experiences for physically handicapped children especially since their impairments have limited their interactions with the outside world. Many physically handicapped children may be shy and introverted as a result of emotional adjustment problems to the handicap and because they are frequently over-protected by family members. Uhlin (1979) states that physical disabilities "may more severely handicap the child if he is unable to emotionally and consciously accept his impaired status" (p. 84). Generally, physically handicapped children will have greater need for acceptance because they may have experienced rejection from others and self-rejection due to the deformity. Anderson (1978) states that these children need experiences whereby they can develop a positive self-image and body-image, as well as opportunities to work independently. She cautions that the frustrated physically handicapped child may exhibit verbal or physical aggressive behaviors, childish methods of acting out, withdrawal into a fantasy world among other more positive adaptations such as compensation (i.e., finding another interest to satisfy his/her needs).

The challenge to teachers working with this population of handicapped children is to provide creative arts experiences which effectively meet the child's needs. Several common areas of concern arise with regard to developing experiences in which the child can and will want to participate. How to adapt art materials for use with a quadriplegic child might be one obvious concern. How to encourage creative movement in a physically handicapped child without fear of injury is another very legitimate problem. There are no easy solutions to education with these children as each physically handicapped child varies so greatly from the next. The key here is to adapt materials and activities. The teacher is frequently faced with the task of creatively brainstorming possible approaches that just may "work." The trial and error method is certainly a valid one with this population, as a teacher may discover an unusual approach that is effective. A child with cerebral palsy may have a normal potential for creativity if the materials are adapted to minimize his/her motor disability.

Uhlin (1979), Anderson (1978), Jungels (1978) and Lindsay (1972), among others, have discussed various means of adapting art materials for use by the physically handicapped. Usually, the child is the best source of information about what adaptations are possible, and which seem most effective. The school doctor or nurse is also an important resource person to consult about the range of movement of which a child is capable, the degree of physical activity in which the child can participate, and the materials with which he/she can interact. (Asthmatic children, as well as others with medical conditions may have a negative or allergic reaction to particular materials.) Anderson discusses some physical adaptations of art media, such as thickening or shortening drawing and painting tools, attaching foam rubber to handles, taping paper to a work surface, weighting down paint or water containers to make them spill resistant, among other innovative ideas. Physically handicapped children who can't use their hands may be able to effectively manipulate tools which are attached to wrists, elbows, head, feet or even grasped by the teeth. Uhlin states that felt-tipped pens, soft lead pencils and ball point pens are effective drawing tools as they create a strong line with little pressure, and they do not need to be refilled. While there is no end to the possibilities in terms of adapting materials and the room environment, there is the reality that teachers who are mainstreaming children with special physical needs into their classes have limited amounts of time and energy to devote to special planning and preparation. Indeed, this is a frequent complaint among teachers. If even a small portion of time could be used to plan and try new ideas, it could open a whole new world of creative expression for these children. The rewards of this special effort by a teacher are great, especially as one observes handicapped children's pleasure in their progress. The desire to adapt, to be flexible in order to meet these children's needs, in addition to an attitude of acceptance are the keys to success in teaching creative arts to physically handicapped children.

For further information on specific creative arts ideas and adaptations for the physically handicapped and other handicapped children, consult Art for All the Children, A Creative Source Book for the Impaired Child, by Frances Anderson, Charles Thomas Publisher, Springfield, Illinois, 1978.

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MENTAL RETARDATION

DEFINITION According to the American Association on Mental Deficiency, (Grossman, 1977) Mental Retardation refers to: significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior, and manifested during the developmental period" (p. 11). In order for a child to be considered as mentally retarded, he or she must score more than two standard deviations below the average IQ on an individually administered general intelligence test, in addition to exhibiting poor adaptive behaviors. Grossman (1977) defines adaptive behavior as the effectiveness "with which an individual meets the standards of personal independence and social responsibility expected for age and cultural group." During infancy and early childhood, these behavioral deficits are manifested in the following areas: sensory-motor skill development, communication skills (speech and language), self-help skills, and socialization skills (ability to interact with others). During childhood and the early adolescent phase of development, adaptive skill deficits are observed in the following areas: application of basic academic skills in daily life activities, application of reasoning and judgment in order to master the environment, and social skills (defined as participation in group activities and interpersonal relationships). During late adolescence and adulthood, the primary areas where adaptive behaviors are lacking are vocational and social responsibilities and performances (Grossman, 1977). This two-prong definition of mental retardation where intellectual functioning must co-exist with adaptive behavior deficits is crucial to understanding how the retarded child behaves and learns.

The possible range of intellectual functioning and of adaptive skills from one retarded individual to the next is broad. Therefore, educational categories have been developed in order to place together those children who are functioning at approximately the same level. The Educable Mentally Retarded (EMR) child is unable to benefit from the regular curriculum of the elementary school, but is considered to have potential in three areas: 1) learning about academic subjects at a minimal level, 2) learning social adjustment to the point of independent functioning within the community, and 3) development of minimal occupational skills so that he/she can totally or partially support him/herself in adult life (Kirk, 1973). Children in this category can usually learn academic skills which are equivalent to the sixth grade level by the time they reach their late teens. In fact, the intellectual and adaptive behavior deficits of the educable retarded child are usually not noticeable during infancy or early childhood. They may appear quite normal, until they enter school and begin demonstrating poor learning abilities. The IQ of these children falls within the range of 55-79.

The Trainable Mentally Retarded (TMR) child differs from the educable retarded child in the sense that educability in the areas of academic achievement, social adjustment and independent occupational skill development is not possible for the TMR child. Kirk (1973) describes these children as having potential for learning in the following areas: 1) self-help skills, 2) social adjustment in family and neighborhood, 3) employment abilities in the home or in a sheltered workshop facility. The TMR child is unlikely to develop beyond the second grade in academic subjects, but he/she may be capable of independent traveling. The IQ range for these children falls between 30 on the lower scale to 55 on the higher end.

The third category which includes the lowest functioning retarded child is termed Severely/Profoundly Mentally Retarded (S/PMR). This type of handicapped child is considered to be totally dependent or custodial and requires constant care and supervision in order for him/her to survive. S/PMR children are rarely, if ever mainstreamed into the normal school curriculum; most likely, they will be enrolled in a special school for exceptional children which can more effectively manage their needs. Severely/profoundly retarded children are not capable of being trained in total self-care, socialization or vocational skills. They generally possess little or no communication skills, and many are non-ambulatory due to physical deformities. The IQ of the S/PMR child, if measurable, is below 30.

CREATIVE EDUCATION FOR THE MENTALLY RETARDED Viktor Lowenfeld (1957) researched the therapeutic aspects of art with children of varying handicapping conditions. He strongly believed that all children are capable of creative growth, stating that "Every human being is endowed with a creative spirit." (p. 430) Unfortunately, a common myth in education which is still held today is that mentally retarded children are not creative, and therefore the recommended approach to teaching the arts is structured step-by-step instruction where each child learns to produce the same final product. Research demonstrates a creative approach is more effective. A research study conducted by Crawford (1962) found a creative arts approach to be more effective than a directed, structured approach. Changes noted in the creative group as opposed to the directed group were: Improved ability for self-expression; increased enthusiasm, involvement and originality; and growth in self-awareness. Crawford concluded that "Creative art activities encourage not conformity, but responses determined from within the individual." The more specific the art product, the greater chance one takes that failure will result. By providing "freedom within limits," the child both expresses him/herself and learns useful art skills. To accomplish this goal, experiences may be introduced where the materials themselves provide a framework or a structure. For example, rather than instructing an entire class how to build a "house" out of wood scraps, and directing each step of the project, a more creative approach would be to give the children the materials and encourage and guide them to build a house that incorporates their imaginative thoughts and ideas. This teaching method allows both the higher and the lower functioning child to participate in a parallel manner, without having the child on the lower end of the spectrum experiencing an unnecessary amount of frustration and failure. One special education teacher expressed her amazement that this type of less structured approach would work with her group of TMR children. She stated, "I found that, by structuring the parameters of an art lesson and providing basic skill instructions, my trainable mentally handicapped students can be somewhat creative and produce enjoyable works in their own right without having a totally structured lesson." (Anderson, et al, 1979, p. 90)

Quite clearly, the growing trend is to accept the fact that retarded children are capable of creative expression. Uhlin (1979) reporting on a survey conducted by Gaitskill, qualifies the potential for creativity in the retarded, stating that only those with an IQ over 40 could benefit from art activities. While it is obvious that lower functioning children will have greater difficulty manipulating materials and producing aesthetically pleasing art products, this does not mean that they should be excluded from arts experiences. First of all, Public Law 94-142 recommends arts education for all handicapped children. Additional support for this is provided by Lowenfeld (1957) who stated that, "We are all by nature more or less endowed with intrinsic qualities and no one has the right to draw a demarcation line which divides human beings into those who should receive all possible attention and those not worth all our efforts." (p. 430) If one is careful not to limit his/her concept of what art is or should be, then it becomes easier to perceive of the S/PMR child as being creative in some way. Therefore, the challenge is to discover and design effective methods which will facilitate each child's creative potential.

Kolstoe (1970) suggests that the manner with which a learning activity is presented greatly determines the effectiveness of the activity. He makes the following recommendations about teaching the EMR child: tasks should be uncomplicated, with a minimum of new elements; tasks should be brief; tasks should be sequentially presented building on previously learned tasks; each task should be designed to allow success; repetition may be necessary when presenting a difficult task and tasks should be applied to real life situations when possible. The arts specialist working with EMR and TMR children needs to be aware of the fact that these children learn at a slower rate and have difficulty in abstracting and generalizing, therefore learning material should be organized accordingly. The teacher should not assume that the child can remember skills from previous learning experiences, so skills may need to be taught anew in each situation. Anderson (1979) states that an art program for TMR children should focus on basic art skills such as proper use and care of art media, tools and materials. She adds that an art program which would be suitable for these

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children would be similar to a pre-primary art curriculum where a manipulative and sensory approach is emphasized. This same method where the focus is on exploration and process can also be successfully employed in music, drama and movement programs, as well as art.

An effective approach to reinforcing key concepts is the integration of arts experiences with academic lessons by combining efforts with the special education teacher. For example, the concepts of color and shape can be creatively taught and reinforced through visual art, movement, drama and music experiences. One teacher using this method of infusing the arts in the curriculum, commented that, "art can offer powerful motivation, both through active manipulation of materials and through a varied use of different tools and processes" (Anderson, et al, 1979, p. 100).

With regard to designing visual art lessons and developing an effective approach, a balance must be maintained between providing too great a variety of art materials, which may be confusing to the child, and varying materials enough to stimulate interest and self-expression, as well as to develop the child's decision-making abilities. Some retarded children need to be shown how to use even the most basic art materials. For instance, the retarded child may not be able to differentiate between finger paint which is appropriate to explore with one's hands, and tempera paint which is usually applied with a brush. Since verbal communication skills are frequently delayed or lacking with these children, it is very useful to demonstrate what is expected rather than to rely on verbal instructions. Uhlin (1979) states that these children need "strong non-verbal explorations of a tactual nature." Three dimensional media, such as collage, clay and wood scraps, not only provide tactual feedback but are also concrete and therefore more easily understood by the child.

Appell (1979) emphasizes the value of creative arts experiences for retarded children; she states, "for mentally retarded children who so often are the victims of society's rejection and scorn, the arts can be a way to create, to perform, and to be recognized for their creations and performances as worthwhile people." Scott (Anderson, et al, 1979) states, "These children need activities in which they can succeed. Art is one way to overcome some of their past experiences of failure."

LEARNING DISABILITIES

DEFINITION Kirk (1972) quoting a definition of learning disabilities from The National Advisory Committee on Handicapped Children states:

Children with special (specific) learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to visual, hearing or motor handicaps, to mental retardation, emotional disturbance or to environmental disadvantage.

The most common learning problems have been ranked as follows: 1) Hyperactivity; 2) Perceptual motor impairments; 3) Emotional ability; 4) General orientation deficits; 5) Disorders of attention (short attention span, distractibility); 6) Impulsivity; 7) Disorders of memory and thinking; 8) Specific learning disabilities in reading, arithmetic, writing and spelling; 9) Disorders of speech and hearing; and 10) Equivocal neurological signs and electroencephalographic (EEG) irregularities (Reynolds and Birch, 1979).

Precise definition of the term "learning disability" (LD) is very difficult as there is such a range of differences in ability from one child to the next. Usually, these children appear quite normal, but have a disability in one specific area. Kirk (1972) discusses the difficulty with categorizing these children, stating: "...children who are not deaf, not blind, not mentally retarded, but who are unable to learn under ordinary school instruction. This is the group that has come under the heading of 'specific learning disabilities'." Frequently used terms describing particular learning problems are as follows: Agraphia—impairment in the ability to write; Aphasia—loss of ability to speak; Dysgraphia—inability to

handwrite due to impairment in motor movements; Dyscalculia— inability to perform mathematical functions; Dyslexia—impairment of ability to read; Figure-ground disturbance— inability to discriminate a figure from its background; Hyperactivity—excessive mobility or motor restlessness; Hypoactivity—slow motor activity; and Perseveration—continuous repetition of an activity.

CREATIVE EDUCATION OF THE LEARNING DISABLED Obviously, the educational approach employed for the hyperactive child will vary significantly from the approach for the hypoactive child. Therefore, the specific remediation depends entirely upon the nature of the learning disability. For example, because the hyperactive child is easily distractible, a classroom which has a minimum of stimuli may be required. This type of child may best benefit from active learning experiences, which can be effectively met through arts activities. By permitting the child to "learn by doing," by participation in art, movement, music, or drama experiences, the learning disability works for rather than against him/her.

Children with difficulties in sequencing, and visual and/or auditory memory may learn and practice these necessary skills through art. Anderson (1979) states that simultaneous verbal and visual demonstrations are most effective for children with this deficit. She adds that it may be wise to combine a kinesthetic experience with a tactile experience when presenting a lesson. This is an ideal way of reinforcing learning through a multi-sensory approach, but Anderson does caution that using several sensory channels for instruction may result in stimulus overload or confusion for some learning disabled children.

Children with perceptual learning problems may also benefit from visual art especially since much of art involves perceptual development. When children have figure/ground disturbances, the teacher may need to reinforce which aspects of an art project are the background and which parts are the figures. Anderson (1979) suggests that three dimensional art work may help children with spatial relationship problems, as the child practices object recognition and visual discrimination.

Common characteristics of learning disabled children are a low tolerance for frustration and poor self-esteem. By providing both choices and limits, the learning disabled child can experience success with a minimal amount of frustration. In addition, activities can be designed which build body image and foster feelings of self-esteem. Such activities as a life size body mural or printing with hands and feet may be effectively used with learning disabled children as a means of teaching and reinforcing various concepts (i.e., laterality, body part identification, spatial awareness, etc.) Appell (1979) states that, "For the child with a learning problem so severe that it constitutes a handicapping condition, the arts can be a response to the need for a variety of teaching techniques and a highly personalized and creative method of communicating information." In conclusion, it is important for arts teachers to be aware of the various learning impairments and to consult with the special education specialist before planning arts experiences (Anderson, 1979).

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ART

ART IN SPECIAL EDUCATION

by Sherry Lyons

... stresses need for teacher to have realistic expectations and goals; gives information to enable the teacher to recognize developmental levels and typical characteristics of exceptional children's art work.

ART AND THE IEP

by Susan Aach

... undertakes the task of identifying appropriate, practical objectives that foster learning for children at early, intermediate, and advanced levels of functioning.

VISUAL ARTS EXPERIENCES FOR SOCIALLY MALADJUSTED/EMOTIONALLY DISTURBED CHILDREN

by Beryl Chemin

... projects thesis of emotional control and intellectual growth as outcomes of well planned art experiences.

ART AND GROUP DYNAMICS IN THE CLASSROOM

by Ronald E. Hays

... alerts teachers to various aspects of the interactional "process" that occurs in every class; discusses structural aspects of the group, tasks given, and art media used.

ART: MANY OPTIONS FOR CREATIVE ACTIVITY

by Charles Battaglini & Ned Wert

... identifies a vast array of visual art techniques (methods and materials) that can be used to stimulate and develop creativity.

ART IN SPECIAL EDUCATION

SHERRY LYONS

SHERRY LYONS is a Registered Art Therapist and a faculty member of both the Philadelphia College of Art and Hahnemann Medical College. She has served as the director of Art Therapy at Ashbourne Day School and also has had classroom experience with exceptional children. She has written previously on such subjects as art therapy techniques applied to the classroom for learning disabled children and developmental art assessments and art for the pre-school child.

Understanding the stages of art development through which normal children progress helps teachers of handicapped students to observe the functioning level of their students and, thus, to design appropriate art experiences.

Initially, children make random marks—scribbles; later, they gain more control and begin to ascribe names to the marks.

Symbols which represent people, animals and objects emerge in children's drawings during the second stage.

NORMAL ART DEVELOPMENT

As children change so does their art. Children draw in predictable ways, going through fairly definite stages, starting with the first marks on paper and progressing through adolescence. Growth in art is continuous and stages are typical midpoints in the course of development. Not all children move from one stage to another at exactly the same time, but generally they follow one another. For the exceptional child, these stages may be foreshortened, delayed, or the child could remain in a particular stage unable to develop and pass to the following stage.

The developmental art stages described here were identified by Viktor Lowenfeld, a noted art educator. The ages that normally correspond to each stage are in parentheses. However, these can tend to vary even with normal children and do not necessarily apply to the exceptional child.

In the first stage (2-4 years), marks that children make are usually random and they do not seem to realize that they can make these any way they want. During this time the graphic activity is predominantly muscular. The drawing is a visible recording of the movements of the child's hand on the page. The emphasis in this stage is on the "how" rather than on the "what" is drawn. Scribbling may begin as an imitation of adults, but the behavior continues in its own right because the child takes delight in the seemingly monotonous play of lines and movement. This feeling applies both to the sense impressions and to the movement. As children move toward the age of three they will discover that there is a connection between their motions and the marks on the paper. They will then start to name their scribbles, thus showing a change from kinesthetic thinking to imaginative thinking. The drawings become records of how the children feel about parts of their environment. The method or way in which they are drawing make the scribbles an important means of communication.

In the second stage (4-7 years), children draw their mental impressions of the object and not their visual observation of it. The product is a representation and not a reproduction because these children do not distinguish between actual reality and their vision of it. Whatever they draw is distorted by their own thoughts and feelings. As children tend to draw what is important and significant to them, most of their subject matter is human; and with their ability to perceive the essentials, there occurs a reduction of the human being into what appears basic: the head, the arms and the legs. This stage is an expression of everyman's basic concept of the body image—the head and limbs are the means by which we relate to the world of people and things. During this stage, children are continually searching for new concepts, their representational symbols are also constantly changing. They will represent a man differently today from the way they will represent a man tomorrow. In drawings and paintings done by children of this age there is often little relationship between color selected to depict an object and the object represented.

Children at this stage have no spatial relationship outside their concept of themselves. Space, therefore, is conceived of as revolving around themselves. This results in their inability to relate things to each other in space in their drawings, and is an indication that they are not yet ready to cooperate socially. (Lowenfeld, 1957)

During the third stage of development in art (7-9 years), the child's symbol of man becomes finite and the human figure has facial features, neck, arms,

In the third general stage, symbols become better established and more defined, base lines appear and colors are used more realistically.

As the child matures, previous symbols are no longer adequate and he/she attempts more visual realism and a conscious manipulation of space.

The fifth stage marks the end of spontaneous activity and the beginning of reason—the student's focus is on the visual appearance of the product. There is a greater awareness of design, color and fantasy.

fingers, legs, feet and often, clothing is drawn instead of a body. Although this symbol seems to remain constant, it should also be flexible. Children in this stage indicate the emotional significance that objects have to them. Exaggerations, neglect, or omissions which indicate children's relationships to their environment, are not only typical of this age, but indicative of healthy emotional reactions.

These children show a new knowledge of spatial relationships by using a base line to organize their drawings. The base line appears as an indication of the special relationship between themselves and their environment. Children in this stage will often simultaneously show the inside and outside of a building or object whenever the inside is of greater importance. The X-ray type picture is most often not used after this stage.

These children discover, naturally, that there is a relationship between color and object. It is no longer a random choice or emotional relationship that determines which color they select for objects in their drawings.

The symbol previously described is no longer adequate to represent the human figure during the fourth stage of development in art (9-12 years). Now, the children want to express characteristics of sex and to show differences in clothing so a generalization cannot suffice. The drawing is not an outcome of children's visual observations, but rather their characterization of what they see. Children in this stage gain a feeling for details, but often lose a feeling for action. Often a greater stiffness can be seen in the representation of the human figure in drawings by children in this stage.

As children develop greater visual awareness, they no longer use exaggerations, omissions or other deviations in expressing their emotions. Children begin to substitute other means of expression to show emphasis, such as an accumulation of details on those parts that are significant to them.

During this stage, children are gradually moving away from their dependency on the concrete; they are now beginning to deal with abstract concepts. They move from a rigid color-object relationship to a characterization of color. They can now do more in their drawings than place things in a row as they did in the third stage. Now, children discover that the space between base lines becomes meaningful, and the plane is discovered. Horizon lines come into use as well as conscious overlapping of objects in space. These children are becoming increasingly critical of others and of themselves and often they begin to hide their drawings from adults. They tend to trace or copy drawings rather than producing their own creative work.

The next, fifth, stage of development (12-14 years) marks the end of art as a spontaneous activity and the beginning of a period of reasoning when young people become increasingly critical of their own products. For some this means a change from unconsciously drawing what is known, to consciously relying upon what is seen. Now the focus is on the end product itself; a picture has value or is good, not because of the effort, interest or involvement that went into it, but because of the visual appearance of the product.

The changes in the representation of the human figure reflect the increased awareness of the changes that are beginning to take place in the bodies of pre-adolescents. Usually the sexual characteristics of these drawings are greatly overexaggerated, reflecting the concern of these young people over their physical development, for these sexual changes can no longer be experienced in a passive way. (Lowenfeld, 1957) These students include joints in their figure drawings and human forms move and appear more active and less stiff than in the preceding stage of development. Pleasure is also taken in cartooning and representing the human figure through satirical drawings. As far as self portraits at this stage are concerned, they seem to be treated in negative terms, regarding the self in derogatory terms.

The three-dimensional qualities of space are now understood by some in this stage, who discover the possibility of making drawings with the illusion of distance. The use of color at this stage is highly subjective. Emotional reactions to color are highly individualized and the nonvisually minded child may use color in contradiction to nature. There is a greater awareness of design, color and fantasy and they begin to play an important role in the student's work. They often doodle over their class notes, reflecting their need for self-expression.

Art has, by the sixth stage of development (14-17 years), become the product of conscious effort. For students in high school, art has become something they

can do, or leave alone. With young children art is primarily done unconsciously. Eight year olds will draw like eight year olds even if they have not had much opportunity to use art materials. Sixteen year olds, on the other hand, will draw in the same way that they have been drawing for the past two or three years, unless they have had the opportunity and desire to improve their artistic skills. For most teenagers, art is no longer a part of their lives--the verbal means of communication has taken over completely, and art no longer works for them as a means of expression or communication. For those who choose to continue with their art, this means of expression continues. The art of high school students reflects their growing self-criticalness, self-awareness and introspection.

CHARACTERISTICS OF THE ART WORK OF EXCEPTIONAL CHILDREN

The reader is cautioned that no one child's drawings will have all of the characteristics of a particular exceptionality, nor does any one characteristic found in the art work mean that a child will fit into that specific diagnostic category. The following are meant to be guidelines describing what the majority of children's art work will look like in each exceptionality. Generally, the art productions are outgrowths of the children drawing the way they feel about themselves and the world around them.

LEARNING DISABLED The art work that is typical of the learning disabled child seems to mirror many of the behavioral characteristics. It merely takes a visual form. In general, the drawings reflect immaturity, poor integration, impulsivity, instability and a poor self concept with feelings of inadequacy and helplessness.

Studies of the human figure drawings of learning impaired children found that developmental items such as the body, pupils in the eyes, the neck, arms in two dimensions, hands, and the arms correctly attached at the shoulder, all appear later in these children's drawings than in those of non-learning disabled children. The results also showed poor integration of parts of the figure, gross asymmetry of limbs, slanting of the figure by fifteen degrees, tiny figures and cut off hands to appear more often in brain injured children's drawings. (Kopitz, 1968)

Dileo (1970) found that brain damaged and learning disabled children's drawings are characterized by impulsivity, lack of inhibition; the child scribbles vigorously all over the paper in a disorganized manner. They also show a disparity between the immature concept of body image and the mental age as determined by other tests. There is an inability to stay within the lines when tracing. The perceptual difficulties show themselves in the impaired ability to reproduce geometric forms, not due to incoordination or visual disorder. The child may draw the component parts of a pattern but may be unable to organize them in meaningful relationships. The failure to establish laterality is manifested by shifting the crayon from one hand to the other.

Brain injured and learning disabled children may show perseveration in their drawings in one of two ways. They may repeat a form beyond the boundaries of the paper or continue to draw when it no longer is appropriate to the picture. Perseveration can also be in evidence by drawing and erasing and redrawing again. Here it is represented by intertwining and overlapped repetitions of lines where a single line would usually suffice. (Uhlir, 1972) In either case it is due to the failure of the inhibitors of the brain to function, so that the behavior or movement is not inhibited. The child continues the movement even though it is no longer appropriate.

The line quality can be heavy and is sometimes drawn quickly as if to make up for the fact that it is sloppy. The fact is, the child cannot close figures or draw "neatly" even if he/she takes more time. The ability to close figures normally begins at age three or four with closure of the circle. The circle is the first shape drawn by the child, followed by a square, rectangle and triangle. Due to perceptual problems and poor eye-hand coordination problems, the learning disabled child often has difficulty in closing figures even as late as his/her pre-teens.

These drawings often look as if they have been made by a much younger child. Often, the learning disabled child is one or two stages behind in his/her art development. Therefore, it is of importance to look at not only "what" is depicted

By the sixth stage, art production is a conscious effort which reflects the student's growing self-criticalness, self-awareness and introspection.

In general, the drawings of learning disabled children reflect immaturity, poor integration, impulsivity, instability and a poor self concept.

by the child but also "how" he/she is depicting it. The forms give important clues to the perceptual-motor functioning of the learning disabled child.

Time-space factors of motion perception depend basically upon bodily awareness and the interaction of the body-self with objects in the environment. Learning disabled children often are not "tuned" spatially and temporally with the environment and they are often not even strongly aware of their own body's weight, position and mass. Consequently, they not only produce a poor body image, but also show poor spatial and organizational relations in their art productions.

The art work of emotionally disturbed children usually looks "different" in content and form from the norm. It may look bizarre or disorganized or stir emotions that normal children's art work does not.

In making observations about the art work of children, it is important to watch the process; evaluating products only can be misleading.

EMOTIONALLY DISTURBED Sometimes the easiest way to recognize the art work of the emotionally disturbed child is that it looks different to the viewer; not less mature as does that of the mentally retarded or learning disabled child, but different from the normal child's in form, content or both. Sometimes it may look bizarre or disorganized or stir an emotion in the viewer that normal children's art work does not. There are indicators of emotional condition that are apparent within the drawings; these vary with the illness, his/her personality, and the presenting symptoms. Generally, the content of the art work is looked at in addition to the forms because both reveal the signs of the emotional disturbance. In making these observations, it is important to watch the work in progress, as evaluation from afar—not knowing the child, not having heard the comments made or seen the way the art work was produced—can be misleading.

The characteristics of form in the human figure drawings of the emotionally disturbed child have been pointed out by both DiLeo (1973) and Kopplitz (1968). The first is scattered body parts. This disconnection is seen as unusual since the majority of children, even when very young, will draw an integrated, connected figure. From the first circle used to represent a person, the features are placed inside not scattered all about. During the tadpole stage when the limbs are added to the circle, they are usually coming directly from the head and are attached to it. Therefore, a human figure drawing in which the parts are scattered with no relation to each other is a deviation from the norm. This constant failure to produce a unitary figure has been noted in seriously disturbed children and is indicative of their own disorganized personality.

The figures can also be seen to be grotesque or bizarre. Sometimes the human figures are scribbled over in an attempt to obliterate them. Stiff, stereotyped figures are drawn by children who may act out their difficulties in a variety of ways. Most of these children show an emotional immaturity and are functioning under an excessive amount of tension. Emphasis on shading parts or the totality of the drawn figure is observed in the drawings of anxious children. The shading may be limited to the face, to the lower half of the body, or more specifically to the genital area.

As the child grows in intellect and personality, the figure undergoes a series of transformations but continues at least throughout latency (gang stage) to be the center motif in scenes that may include houses, animals, trees, etc. It is unusual for young children to consistently omit persons from their drawings. When they do, it may be considered that there is a probable difficulty in interpersonal relationships.

The inability to distinguish fantasy from reality is seen in the emotionally disturbed child's art work by an apparent "inconsistent fusion" of fantasy with reality. Lauretta Bender (1952) feels that the schizophrenic child often shows remarkable artistic ability in graphic arts. She feels that the essential psychological problem is the difficulty in recognizing one's self and one's thinking in relation to the rest of the world. Thus the drawings may appear fragmented or even chaotic with an absence of order.

Emotionally disturbed children tend to let down their defenses when expressing themselves through drawing and painting and often produce works barely distinguishable from those of younger children, both in the use of geometric lines to produce a schematic form of representation as well as in the frequent use of base lines for space schema. (Lowenfeld, 1957) The difference between this art work and that of a normal child or of a learning disabled or mentally retarded child is that in the case of the emotionally disturbed child, the apparent immaturity is seen as a regression back to earlier, more primitive forms.

An inability to distinguish fantasy from reality is evidenced in the art of some emotionally disturbed children.

Whereas, learning disabled and retarded children have not yet progressed in their forms beyond the point exhibited in their drawings. Close examination of the drawings or paintings of the emotionally disturbed child shows a lack of coherence—a quality found in a young normal child's art expression and in that of the primitive. One of the factors responsible for this lack of coherence is the distorted body image, or in other words, the inability to recognize the self as one's own self. This not only leads to the inability to identify oneself with one's own experiences, but also to the total lack of projecting oneself into the needs and feelings of others and therefore of having any successful social relationships. This is seen in the art work as the inability to make coherent motions and actions and accounts for the somewhat "stiff" look of the figures in these drawings.

Often a particular theme is repeated several times in a child's art productions. This can be carried to extremes by the emotionally disturbed child who will repeat the same theme almost to the exclusion of all others. One can assume from the repetition the importance of this theme to the child's emotional life.

The way that the media is applied often gives clues to the child's emotional state and his/her feelings about what is being depicted. Strong feelings can be seen in the vivid use of color, thick or heavy line quality, or areas may be overworked. Conversely, there may be feelings of ambivalence shown in timid, sketchy lines with a limited use of color.

There is an incoherence of thinking and a different kind of reasoning used by the emotionally disturbed child. In art expression, this disturbed thinking, the confusion of self-identity and faulty reasoning has its own characteristics. It allows emotionally disturbed children to put things together in an extremely incomprehensible way with no apparent relationship, and devoid of any other relationship than the ones based on purely "individualistic" associations. With lack of reasoning, the emotionally disturbed child also loses the use of common symbols, that is, the symbols are often personal to the child and do not have universal or common meaning. This makes any general interpretation quite difficult.

VISUALLY IMPAIRED Both Dileo (1978) and Lowenfeld (1957) believe that the art work of the visually impaired child does not differ substantially from their normally sighted peers. The blind or visually impaired child will begin drawing in the same fashion as does the normal sighted child, i.e. by scribbling. Although visually impaired children pass through the normal art development stages, they do so differently and it is these differing characteristics which will be addressed now.

Lowenfeld (1957) notes that the visually impaired child seems to adopt a schematic representation (a conceptualized symbol for "man," "tree," etc.) sooner than the average normal-sighted child. He offers two probable reasons for this occurrence. The first appears directly linked to the handicap. Tactile experiences, which are the visually impaired or blind child's chief source of impressions or stimulation for drawing, are more limited initially when compared to the initial visual impressions of his/her sighted peers. The second reason is related to what Lowenfeld calls a "secondary handicap." He feels the child's "greater insecurity and lack of confidence" may result in a schematic representation sooner. The schematic object represents a consistently recognizable object for the visually impaired/blind child to offer the world. It would seem important for them to be able to produce an "image" because of the acceptance it affords them. It seems that more praise comes from parents and teachers of visually impaired/blind children when they draw something recognizable because expectations for drawing, if present at all, are not as high as for sighted children. Once recognizable forms are produced it would seem to follow that they would be reproduced again and again for the secure emotional contact with the world it offers the child. Accordingly, it would seem that the visually impaired/blind child would remain in this early stage longer. Lowenfeld (1957) found that in general, "...the schemas of the visually handicapped children are less clearly articulated than those of the average normal-sighted child." Visually impaired/blind children seem to use a base line orientation longer in their drawings than normal-sighted children. This linear space concept may be held onto longer because their world seems to be self-centered; i.e., "what I can touch." For the visually impaired child to give up a baseline concept

The symbols used by emotionally disturbed children are often very personal and do not have common meaning.

Tactile experiences are the visually impaired/blind child's chief source of impressions or stimulation for drawing.

A linear representation of space may be continued longer than normal in the art of visually impaired/blind children.

would be difficult as he/she does not experience depth perception. Perspective, another spatial characteristic, is not based on depth as it is with normally sighted people. It is based on a personal value system. What is important is drawn larger, with depth perception (near and far) not entering into their consideration.

The reality that visually impaired children have to "touch out" into the world may restrict them, but it should also be emphasized that it is potentially a very positive area for the child. Uhlin (1972) states that "tactile sensitivity is an open door for the blind child in art. Textured lines may be found to move and produce shapes as well as textured surfaces defining forms. Collage experiences may be used to help the child discern form and enrich his concepts, in addition to developing his total gestalt capabilities and his aesthetic sensitivities, as well." Most authors writing about the visually impaired child creating in art focus on the tactile sensitivity of the child as a place of strength to definitely begin to reach out to him/her.

Those children who are blind at birth create a sense of body image from experiences of their own bodies and limbs at rest or in motion. When asked to model or sculpt a figure, like very young sighted children, they model each part of the body separately. In the next stage, which lasts until around ten, parts are seen as part of a greater whole. The earlier separate parts are put together into a unified whole figure. The resultant figures by blind children do not show as many parts as sighted children. Eyes, like sighted children, are molded as a hollow with a ball placed in it. Even though it may be diffuse and incomplete, the blind child will have, by the age of ten, developed a sense of "totality" as regards the modeled figure. At about age fourteen those who seem able to express themselves through modeling, show movement toward "realism" as a result of the "concept raised by touch visualization." The blind and visually impaired, like sighted individuals, tend to be divided into two main groups expressively. There are the realistic (visually oriented) persons and the impressionistic/subjective (feeling or haptic oriented) individuals. Lowenfeld (1957) believes that because body experiences such as muscular sensations, kinesthetic experiences and touch are the chief sources of input for the visually impaired that more of them are haptic (subjective) in their expression in art.

Visually impaired children usually respond well to art experiences. Art appears to be a dynamic experience for them because of their capacity for expression and their sensory involvement with materials. The appreciation for the visually impaired child's art work will be heightened further if it is remembered that one does not have to see to create: "It is not at the site of the retina that the artist formulates his view of the world." (DiLeo, 1973)

HEARING IMPAIRED There should be no difference in the art aptitude of deaf children as compared with hearing ones. Traits such as originality, sensitivity or intuitiveness, which are characteristics of artists, are also likely to be found in a person who often has to guess at the meaning of events. A person who cannot ask questions and receive answers, is more sensitive to whatever clues are available. Furthermore, there is reason to suppose that such people rely heavily on their eyesight and become observers through necessity. With perceptions already concentrated on what is visible, it would seem natural for them to respond through the same channel from which they receive most of their impressions. Thus art, being a predominantly visual means of communication, remains open for the deaf child. (Silver, 1978)

Even though children may be without language it does not mean that they are without symbols. Silver (1978) has suggested that, "like language symbols, art symbols are a way of labeling perceptions and imagining experiences."

Sometimes the symbolism in the paintings and drawings of deaf persons is different from that of hearing persons. Because of language deficits, the conceptual transference of thoughts makes their drawings often resemble those of children who are very confused. These drawings do, however, focus on a problem and express only what is necessary to get the idea across to others. The self image of the deaf child is often portrayed by a sparse drawing, sometimes stick figures and usually fragmented in terms of body parts.

Deaf children rely quite heavily on imitation in order to learn. Thus it may appear that they are uncreative. It has not been proven that there is really a lack of creativity. Perhaps the child places too much emphasis on pleasing by

Art appears to be a dynamic experience for visually impaired/blind children because of their capacity for expression and their sensory involvement with materials.

There is reason to suppose that hearing impaired or deaf children rely heavily on visual observations; art is a natural means of expression for them.

imitation.

The results of a study made by Lampard (1960) revealed that deaf children's art work was uncommunicative in that it lacked a story-telling quality. The subject matter of the art was as schematic as the manner of representation. The few people or animals that did appear showed little action or interaction among them. The work was said to be careless, rigid and the children showed very little involvement and interest although they did show pleasure. Lampard felt that the sense of well-being was achieved by a shutting out rather than a working out of anxiety.

The deaf child's art work has often been characterized by indicating the child's feelings of isolation. All too often there is only one person or object in the drawing. The figure drawings seem either to emphasize the body parts needed to communicate or to leave figures out of the picture completely. Where there is no speech there may be no mouth. The figures may show enlarged hands if the child uses sign language. The ears may be enlarged or may be omitted completely. If the child wears a hearing aid, this may be included in the drawing also. The exaggerated head size which seems to be prevalent in the drawings of deaf children. Uhlin (1972) feels is indicative of the emphasis upon the self and shows egocentricity. Where this would normally be seen in the drawings of the early stages, the head size should become more in proportion to the body by the age of eight. Since this enlarged head size often continues in the deaf child's drawings much past this age, this may reveal an immaturity in emotional development.

Silver (1978) states that, "few, if any, educators seem to be aware that the drawing of a man can be a generalization and a symbol for a class of objects, just as the word 'Man' is a generalization and a symbol." It is conceivable that art symbols and procedures can serve deaf children as a means of pinning down perceptions and organizing experiences, and can provide their teachers with clues to their cognition. It is also conceivable that art experiences can serve to develop their capacity for abstract thinking.

PHYSICALLY HANDICAPPED The most obvious characteristics of the art work of physically handicapped children can be seen in the way they depict their own bodies in their drawings and paintings. Minor physical impairments, perhaps even imaginary ones, may seriously handicap children and be expressed as major problems in the projected body image. In the depicted image of the self is also seen the emotional secondary effects of a physical impairment which most usually, and more severely, handicap the child. If somatic function is impaired, the body image will itself be distorted as the child views his/her immediate bodily environment with an emotional bias for the disabled part. The type and degree of distortion will depend upon the actual impairment and the child's response, in terms of acceptance or rejection, to the impairment. (Uhlin, 1972)

Handicapped children who are concerned about their disabilities will reflect these concerns in their human figure drawings, just as they would any other concern or anxiety. Their attitudes toward their disabilities will depend, of course, on many factors in addition to the actual severity of the handicap. Some youngsters may feel impaired and handicapped long after their disability has been corrected, while others may learn to overcome their initial anxieties and may develop a positive self-concept even when there is no objective evidence of improvement in their physical condition. In some instances, concern about the handicap may increase as they get older; in other cases it decreases with age. These concerns and adjustments are in evidence in the child's human figure drawings. (Kopplitz, 1968)

Continuous exaggerations, omissions or distortions of the same body part usually points to a defect or abnormality of that particular body part. (Lowenfeld, 1957) It is important to note that such projection in the body image must be consistent. Children without physical impairment will, sometimes, exaggerate and distort forms to express emotional significance in a particular experience. The physically impaired child will consistently project irregularities in self image.

Research of the projected body image of physically impaired children has placed emphasis upon the importance of having the child draw him/herself rather than just "a man" or "a woman." Mortorana (1954) found in her study of

The deaf child's art work has often been characterized as being indicative of feelings of isolation.

Art symbols and procedures may serve deaf children as a means of pinning down perceptions and organizing experiences.

Physical impairments may be projected in figure drawings.

The better a physically impaired child is adjusted to the handicap, the closer his/her drawings correspond to those of normal children.

orthopedically involved children, that ninety-four percent of her population drew normal figures in response to the Goodenough "draw-a-man" technique. When the same population was asked to draw a self-portrait, seventy-two percent of the children revealed their impairment by exaggerations, omissions or distortions of form in the projected body image.

Drawings may also show feelings of inadequacy, poor self image, frustration or depression depending on the emotional status of the child. The better they adjust to the handicap, the closer their drawings correspond to those of the normal child.

The physically handicapped child is often unable to get started and involved with the art media. Some of this can be caused by the unorthodox way in which the art materials have to be used. When a physically handicapped child is mainstreamed into a regular classroom, the lack of initiative may become more pronounced. The child needs encouragement and assurance in order to begin to experiment. The line quality of the drawings is often seen to be timid. This characteristic, too, goes along with the lack of self assurance.

It is generally expected that the art work should be done with the hands. If the child does not have use of hands or arms or free mobility, he/she may withdraw from using art media, thinking that art is not for him/her and the adaptation that must be made to the art tools is more trouble than it is worth. However, the physically handicapped need any and all outlets for their frustrations. It is important that they learn to conquer seemingly "alien" areas of expression in order to build their ego strengths.

A lot of the physically handicapped child's concept of art is formed and fostered by teachers. If the teacher is open to experimenting to find the most comfortable medium and the best way to work with it, the child will become more relaxed and open to the art experience.

MENTALLY RETARDED It has been stated that in some respects the drawings by mentally deficient children are like those by younger normal children. But this statement is only partly true. The differences are not merely qualitative, but quantitative as well. In human figure drawings, as well as all other drawings, mentally retarded children achieve little in the way of cohesion among the elements in their pictures. Also, they fail to obtain good relationships of body parts to one another. (DiLeo, 1970) There exists a presence of both primitive and mature features in the mentally retarded child's drawings. Even when the subject matter (content) depicted is appropriate to their chronological age, the forms still may appear primitive because their drawing ability is closely related to their mental age. One might say the main characteristic of retarded children's art work is its immature appearance when compared to normal children's art work.

Retarded children draw in a more stereotyped fashion than do normal children. Their forms and all imagery tend to remain constant to the extent that the drawings appear almost as carbon copies of one another. This repetition can serve one of several purposes. Sometimes retarded children use the repetition for mastery, but more often, they repeat the form because it is the only recognizable form that they can make. Perseveration also is often a part of their drawing and painting. Perseveration is an inappropriate meaningless repetition of lines, forms or symbols.

Being slower to learn, retarded children tend to remain in art developmental stages longer and move through them more slowly. When young (preschool) there may be some overlap in their art abilities with normal children because all children are scribbling or making basic shapes at this stage. The retarded rarely progress beyond the schematic stage in their art development. This, too, would explain the rigid stereotyped symbols (schema) that are typical in the art work.

The "House-Tree-Person" drawings of mentally deficient children generally reveal simple form concepts produced with good motor coordination. A general lack of self-identification is typical in the simple figure concept of the mentally retarded child and a poor social adaptation will follow as it is expressed first in a poor gestalt organization of the drawing surface, and then poor or late arrival, at best, of a schematic space. (Uhlir, 1972) It is noted that one rarely sees any expression of spatial depth or motion in retardates' work. Relative positioning (placement of objects on a page in relationship to one another) and

Adaptations of art tools or their usage are sometimes necessary—experimentation can lead to success.

The notion that the art of mentally retarded children is like that done by younger, normal children is an oversimplification—both primitive and mature features may coexist.

Retarded children draw in a more stereotyped fashion than do normal children.

One rarely sees any expression of spatial depth or motion in the art of retarded children.

overlapping (placing one object partially in front of another to indicate depth) may be depicted by a few retardates to indicate perspective, but even they will never discover relative size and linear perspective. The haptic-type of experiencing of the retarded child is expressed in art in the piece-method approach to modeling, in the bold, continuous-line character in drawing, the emotional use of color, and the expression of tactual and kinesthetic awareness.

Considering both the abilities and deficits as characterized in the art work of retardates, their basic needs are described as being: a need to be sensitized to form and space, a need for enrichment of concepts, more flexible use of concepts, deeper emotional sensitivity and social confidence. (Uhlir, 1972).

In conclusion, the art produced by exceptional children tells us many things about how they view themselves and their environment. It is revealing in both form and content and can give us clues to the child's level of functioning as well as his/her use of non-verbal expression. The purpose of becoming familiar with the art work of special children is two-fold. First, the characteristics of the art work often mirror the behavioral and emotional characteristics so that the art can give a visual representation of the child. If the teacher is sensitive to the art, it can be used as a barometer of the child's thoughts and feelings. Secondly, ascertaining the exceptional child's abilities, deficits and functional level in the visual art area, will help the teacher to make the necessary adaptations in creating a meaningful art experience.

Art produced by exceptional children tells us many things about how they view themselves and their environment.

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ART AND THE IEP

SUSAN AACH

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Even though it may seem difficult for handicapped students to make a product, they often express feelings of discovery, delight and mastery when in the midst of art experiences.

Skill with each kind of media (e.g., clay, crayon) is acquired through a series of steps.

"Spreading glue in a circular motion" may be a legitimate, though unfamiliar objective for some handicapped students.

What does a handicapped child learn from doing an art activity? In what way do art experiences help realize goals and objectives the teacher has written for the Individualized Educational Program (IEP)? Many of the teachers with whom I have worked and spoken, have expressed questions about what a handicapped child learns through art. Initially, our discussions often focus on what the children do when they are given art materials. The teachers remark on how funny the students' work looks, how difficult it is for them to make something, or how inappropriately they use art materials (e.g., mouthing, flapping). Dorothy, a teacher of a class of young trainable and educable mentally retarded children, reported, "My students won't be making people out of clay, or houses from wood and glue, for a long, long, time. To tell you the truth, I just don't understand what the objectives should be when I try art activities with my kids." Many, many art and special educators share Dorothy's feelings. Not all handicapped children are able to make figures out of clay. Many of the children work very "primitively." Working with materials, they demonstrate difficulties at coordination and discrimination. Compared to their non-handicapped peers, they seem to have more trouble initiating and elaborating ideas. Seemingly, for some children, even awareness of materials is limited. Teaching art to these children can be frustrating and confusing. Sensitive to these concerns and questions, Rubin (1978) states it is "especially important to clarify the goals and values of art for the handicapped child." (p. 234)

To explain what the handicapped learn through art, the efforts of individual children are described here. The children in these examples express the feelings of discovery, of delight and mastery that all children can experience, but perhaps are not able to verbalize. Through their words, hopefully, the adults' understanding of what is learned through art will also be enriched.

The illustrations provided aim to document two basic ideas about art objectives for handicapped children. First, art can foster learning at different levels of functioning. To accomplish this, the teacher needs to recognize that skill with each kind of media (e.g., clay, crayon, etc.), is acquired through a series of steps. Anderson (1978) explains that in reading, math and art, "task analysis may be a requisite for the instruction of an impaired child." (Morreau, 1975) Anderson recommends that the teacher "execute the art activities himself. Thus he can identify, list, and then sequence. . . the subskills which a child needs." (p. 46) Therefore, if a teacher wants to instruct children on how to glue blocks onto a cardboard surface, the following questions should be answered: Are the children comfortable with the feeling of glue on their fingers? Are they able to complete the motor sequence necessary for applying the glue to the block (e.g., rub)? Do they understand how to glue a block down? Do they show an understanding of how to arrange blocks in different ways (e.g., next to, on top of)? Each of the subskills identified in the questions can be an objective for a lesson. Based on assessments of their students' ability levels, teachers can select the appropriate skills and methods.

Many art and special educators recognize that their handicapped students may not be ready for art projects like enameling or silk screen printing. Still, reflecting on tasks their children are ready for, they often wonder "Is this art?" "Spreading glue in a circular motion" or simply "placing finger(s) and/or palm(s) in glue," are unusual objectives for art tasks. Yet, handicapped children, unlike their non-handicapped peers, do need the teacher's help to learn many of these subskills. Through imitation and/or problem solving, normal children

acquire these skills independently, often before reaching school age. Though unfamiliar, as Rubin (1978) explains, these objectives are legitimate: "manipulative and making activities are to art, as babbling and jargon are to speech. They are a preparation for formal expression, and constitute as legitimate a part with the handicapped, as reading readiness for the average learner." (p. 234)

The second idea that the case illustrations aim to document is that art can foster learning in different areas of growth (e.g., sensory, cognitive). In order to facilitate implementation of art experiences in the reader's own setting, the objectives for art activities are discussed according to four subject areas which commonly appear on the IEP. These areas are social/emotional, sensory, motor, and cognitive growth. Naturally, opportunities to do art stimulate growth in other areas also. In each area, an effort will be made to discuss objectives for children at early, intermediate and advanced levels of functioning.

SOCIAL/EMOTIONAL DEVELOPMENT

Helping children to be aware, to be independent, and to express, clarify, and cope with their feelings are important objectives in fostering emotional development.

At the earliest levels, a major way art contributes to emotional development is by stimulating a handicapped child's awareness of him/herself, of others, and of materials. How does this occur? An IEP for a severely/profoundly retarded child can state objectives like "associate a positive feeling with sensory experience (e.g., visual, tactile)" or "stimulate awareness of touch." Art media like fluff feathers present the child with soft textures and bright inviting colors. Perhaps the teacher would like to work with the child, arranging the feathers into a collage. An important preliminary to such creation might be opportunities for simply feeling and looking at the materials. To stimulate awareness of body parts, like fingers and hands or foreheads and cheeks, the gliding gooey feeling of warm fingerpaint or colored shaving cream, could be introduced. Used by the teacher, in accompaniment with slow, rhythmic fingerplays (e.g., "This Little Piggy"), these highly sensory materials may help both the teacher and the child to enjoy the experience more. Perhaps making pictures is not appropriate; and so the squeak, aroma, and paths colored by a magic marker, could be tools for stimulating awareness of sound, smell and sight. "Listen to the squeak" the teacher might say, and make a sound. "Where's it going to go?" he or she might ask, and help the child follow the movement of the color from one side of the paper to the other.

At an intermediate level, having gained an awareness of self, increasingly, the child's efforts at exploration can be focused on objects and media. Now, art can provide important opportunities for developing feelings of independence. Silver (1978) describes art as "self-rewarding" (p. 108) and Krone (1978) states: "The opportunity to make personal decisions. . . encourage(s) independence. The child learns that it is important for his or her artistic expression to provide personal pleasure. . . There are no wrong answers, but many right answers." (p. 2) Rubin (1978) observes that often, handicapped children are "passively led, dressed, doctored, etc." whereas in art "they can be the active ones who do something to and with materials." (p. 235)

The teacher is able to help the child learn to be more independent through presenting media alternatives, and encouraging individual choice, and individual expression. The IEP at the intermediate level could state: "Attempts independent use of a material or tool," or "Given a choice between two materials, indicates a preference for one." Examining chunks of waterbase and oilbase clay, the child can select the preferred type. Given brushes and tempera paints, the child can determine how the colors should be mixed, and where to apply them on the paper or object surface. The sense of independence afforded by playing with art materials is vivified as Lisa, a nine year old partially sighted girl, colors some styrofoam egg shapes with tempera. She explains:

Sue, I'm gonna take these styrofoam eggs. Heh, I know—let's get some bowls and put paint in them and drop the eggs in. Hmm, first I need some white. Now some red. Stir it around with the spoon. It's pink! Wanna see me make it a darker pink? I'll put some more red in.

Art can foster learning in social/emotional, sensory, motor and cognitive areas.

The squeak, aroma, and paths colored by a magic marker could be the means for stimulating awareness of sound, smell, and sight.

Children who have opportunities to explore a variety of materials learn to distinguish the properties of each and to make choices. This affords them some independence.

Roll around the egg, roll around the egg, and now fish it out. It worked! It's pink!

Now let's get another egg and another mixing bowl. How bout green? I like mixing the colors. Put in a big glob of yellow, a big glob of blue. Look Sue, it's turning green. . . Heh, I got an idea—let's stir an egg in the waterbowl. Pretend I'm the Easter Bunny, and you're my helper. Some day you may be an Easter Bunny too. Could I take these eggs home? I'm so happy I could jump or blow up or go up to the ceiling. . . I'm very proud of my eggs.

Lisa experiments, deciding if the colors should change from darker to lighter, or duller to brighter. Stirring blue and yellow into green, she also develops feelings of mastery and self-esteem, as well as independence. As Silver (1978) notes, "Art experiences provide special opportunities for establishing confidence." (p. 110)

At advanced levels of functioning, through "media contact, as well as through symbolic representation" it is possible for handicapped child "to communicate what they are thinking, feeling, wishing and imagining." (Krone, 1978, p. 1) Objectives appearing on the IEP can state, "The child will associate an idea (e.g., about the people, animals, places, events, feelings) to a picture or sculpture." Bobby, a six year old partially sighted boy, finds art allows him to talk about important people and events in his life. He describes his styrofoam print, "Me and my Sister Gummi on the Sled," as follows:

I put my boots, scarf, and coat and hat on; and start to go out and play. Then one of my sisters, Gummi, gets ready. Then she comes out. Then we go sledding up on the hill. Ah Zoom. Ah Zoom. We jumped on the sled, and we went flying down the hill. Then Gummi turned the sled and we went flying home. Then we was shivering. It was cold. And then the rain started to come. And then we kicked our boots and ran inside and started to set down at the supper table.

Through art, a child can talk about the world he/she knows, or the one he/she imagines. Using clay, Jonathan, a seven year old partially sighted boy, pinched out a bowl-shaped piece. Next, he filled it to the rim with little round clay balls. Referring to the piece as "The Blackbird Nest," he explained:

Once upon a time a blackbird lived up in a nest. And one day the bird had babies. The bird had so many babies, she had to make another eeny nice nest.

She put a couple babies in the other, and made another for the littlest. Next morning they all woke up at the regular time, and the mother said, "It's time to learn how to fly." And you know what they found? A wrinkled up camping thing. They opened it up and it was a pack of popcorn. They all started chomping and eating.

In their artwork, children can talk about happy and silly imaginings, as well as sad and scary ones. While the psychotherapeutic use of art should only be attempted by those with proper credentials, Rubin explains that handicapped children can "express many feelings in and through art, safely relieving inner tensions while creating aesthetic forms." (Rubin, 1978, p. 236) Using a pointed tool and a sheet of styrofoam, Robin, a six year old totally blind girl, drew a picture of "a scared witch." Tracing her finger over the marks she made, she explained: "Well see, this is a little ditch. Its for like in case she falls or sompin, maybe. And we don't want her to get hurt. And that ditch kinda like keeps her up, so she won't even fall." For many visually impaired children, as for the "scared witch," orientation and movement in space are often confusing and frightening experiences. Inventively, in her artwork, Robin expresses this concern, and tries to alleviate the problem by creating a "protective ditch."

Whether the IEP states self-awareness, independence and self-esteem, or expression of feelings and ideas as objectives for emotional development, art activities are extremely valuable and important ways of working towards such goals.

MOTOR DEVELOPMENT

Whether swirling a brush on canvas, pinching a hollowed well in a ball of clay, or rubbing glue over the parts of a papier mache animal, learning how one's hands, body, and materials can move is a basic part of the art experience. Krone (1978) points out:

Through art, a child can make statements about the world he/she knows, or the one he/she imagines.

Art activities can be useful in the development of manual dexterity for the exceptional child. Hand-eye coordination can be improved, better muscular control can be developed, and perceptual difficulties can be aided. (pp. 1 & 2)

For children functioning at very early levels, a major value of art is to increase awareness of body parts and movements. Use of adaptive equipment and selection and presentation of materials will be important factors in eliciting optimal motor responses. For example, reaching a tray of fingerpaint may be easier for severely handicapped children if they can lie on a wedge with their arms extended over the edge. To actually swirl the whole hand in paint, these students may need to have ladle rather than spoonful size portions on the tray. Given fingerpaint, normal children try movements like squeezing, swirling and "pitter-patting" with their fingers. Sometimes, teachers of severely handicapped children may wish to allow them to experience these movements. If so, directing the child through verbal statements and physical manipulation is probably indicated. Increasingly, through body movements, the child develops awareness of body parts. Therefore, at this phase, objectives such as "stimulating awareness of the fingers, arms, or wrists," can be listed on the IEP. To work toward such growth, the teacher's own efforts at movement are as important as encouraging the child's. For these children, the important objective is introducing a sensation of movement. At times therefore, rather than just placing the child's hands onto the tray, the teacher may want to press the child's hands, swirl them or hold them with his/her own.

At an intermediate level, children are ready for more active exploration. Now they become aware of how their movements affect the shape of a material. On the IEP, objectives such as "reaching for an object," "grasping an object" or "engaging in a simple motor manipulation (e.g., slam, squeeze) of an object or material" can be listed. Eventually, the child uses movements very deliberately in making things happen to a material. At this point the IEP can list objectives such as "rolling, poking, or twisting a piece of clay, etc." Katie, an eight year old totally blind girl, uses various tools (e.g., rolling pin, mallet) to move and change the contour of some waterbase clay into a "Texture Invention." She explains:

I'm using this big thing to pound with. I call it the round bottomed hammer, because it has a round bottom. When you move it up and down on the clay, it leaves little round tracks. Now I'm gonna smack this clay with this paddle. . .

Now see when I use this scraper it causes little crumbs. They could almost come off, but I push them in. It makes texture. Its very like carving. Now I'm gonna use the square hammer. One side has real strong dots. The other side has weak dots. First, I'll use the weak dots. I have to pound firmly so the dots go into the clay. Boy that's a sculpture.

Now I'm taking the sides of the smacker, and pushing and digging into the clay. It makes like lines blind people can feel greatly. Yeh, this is the greatest feeling I've ever invented!

At an advanced level of functioning, children apply their learning about how materials can move to help them represent people, animals, places, etc., in their work with different materials. For example, the child bases decisions on how to model a face out of clay on what he/she has learned about what happens when he/she pokes rather than pinches the media. Three important objectives at this advanced level include that of 1) helping children to identify relationships between a given motor procedure and a certain shape (e.g., rolling makes a round shape); 2) facilitating their efforts to pair or match these shapes with forms in the natural (e.g., trees) and man-made (e.g., planes, buildings) environment, and 3) helping them to associate individual feelings to various movements (e.g., pounding, slapping).

SENSORY DEVELOPMENT

As handicapped children use art materials, they discover sounds, smells, sights, feelings and perhaps even tastes. Art provides us with innumerable opportunities to exclaim through each of our senses: What a soft feather! What a wet, slippery piece of clay! Fingerpaint is thick and creamy and crinkles when

Given fingerpaint, normal children try movements like squeezing, swirling, and "pitter-patting" with their fingers; teachers of severely handicapped children may need to direct them to experience these movements.

you squeeze it! Mixing some paints, like red and white, you get lighter colors! When yellow paint is added to red, you get something new—orange!

Recognizing that sensory deficits do impose some limits on the handicapped child's awareness of materials, Rubin (1978) contends:

While some avenues of learning or expression may be blocked, experiences with materials can help a handicapped child further develop those sensory and productive avenues open to him—like touch for the blind, vision for the deaf, and manual dexterity for those whose legs are immobilized. (p. 235)

At very early levels, establishing an awareness, a tolerance and hopefully a positive orientation to tactile, visual, auditory, olfactory, and gustatory sensations is of utmost importance. On the IEP, objectives such as "indicates awareness of tactile stimuli" or "attends to visual stimulus" can be listed. Interestingly, some of the children who have difficulty tolerating tactile involvement with media are not severely handicapped. For both lower and higher functioning populations, use of non-art materials, like shaving cream, have been useful in encouraging a positive tactile orientation and sensitivity. Lily, a five year old totally blind girl, often expressed reluctance about getting "all messed up." Lily communicates both the concerns and delights she associates with "messaging" as she describes her feelings about trying shaving cream:

What does the cream feel like before it's all shook up? Is it messy? Is it real gooky? You tell me. (Lily pulls the top off and presses the nozzle.) Now I'm gonna shake it and try it. See, it's lumpier. I want a lot. There, I got a lot, didn't I? . . . Ooh, that feels good. Can I get all messed up? (The teacher says yes.)

It feels real messy and gooey. You want some? (She gives the teacher some.) I want more—lots more. Rub it around and around. OOGunk, gunk, gook, mess, ecch. Oh it feels fun.

How will we get it all the way up my arm off? (The teacher explains they can sponge it off with water.) All the way up around my elbows—it's ok, I can rinse it off—and I have this smock on. I'm glad. Cuz I'm goin crazy! I want more, lots more.

Tell me why you can't touch messy things? . . . Maybe people feel children wouldn't like the feeling. . . they might get angry. . . or it might make 'em nervous to see children get messed up. They might be afraid it can't wash off. . . This will wash off won't it? (The teacher says yes.) Well then I'm GOIN' CRAZY!

With great animation, Lily helps us remember how much fun touching can be.

At the intermediate level, objectives shift from sensory awareness to sensory exploration. For example, previously, the teacher worked to stimulate awareness of a sticky media like glue. Now, figuring out "how stickiness works," discriminating and recognizing the sensation, is the major objective. The teacher wants the child to understand that when objects or materials "stick," that means they are held together.

Eventually, the child considers the sensory properties of media more formally in his/her artwork. When he/she draws a picture of a house on a cloudy day, he/she tries to represent the dimmed brightness of the sun in the colors chosen. Similarly, when modeling a monster out of clay, the child will think of texture as he/she forms the monster's back, hair and facial features. Through play with materials, children gain a literacy of the sensory world that Hartley (1952) believes "precede and form the basis for later abilities to comprehend and manipulate abstract symbols." (p. 156)

COGNITIVE DEVELOPMENT

If you want a clay figure to stand upright, how slim or fat should you roll the legs? If you don't want the sculpture of a house to totter, how fat does the bottom block have to be? If you want the clay to be more "squoshy" and slippery, what do you add? Using art materials can be a stimulus for intellectual growth. Through the art process, the child learns to think, as well as manipulate and discriminate. Specifically, according to Silver (1978), through art, children's abilities "to associate and represent concepts," "to order sequence, and conserve," and "to perceive and represent concepts of space," can be

Through play with art materials, children gain a literacy of the sensory world.

developed. Silver bases these conclusions on studies she has conducted with hearing impaired children. Silver wonders:

Would drawing pictures enable a child to sustain thoughts he cannot verbalize or to associate them with past experiences, or would they trigger new associations? Can art procedures bypass language disorders and lead a child to the fundamental mathematical or logical ideas that are usually learned through language? (pp. 10-11)

At the earliest levels of functioning, the processes of thinking and knowing develop through the stimulation that a child's sensory and motor systems receive. For example, a child comes to know what "soft" is by experiencing soft sensations (e.g., blanket, caretaker's body). Therefore, initially, cognitive development is fostered through stimulation of the sensory-motor apparatus. As stated earlier, art provides a child with multiple opportunities for kinesthetic and sensory input.

At intermediate levels, engaging the child in more deliberate efforts at reaching for, exploring, and investigating objects and materials is encouraged. As objects become increasingly familiar, IEP objectives for art can include introduction of concepts like same and different, big and little, few and many. For example, gluing a collage of sandpaper pieces and feathers, or making a playdough mixture using flour and salt or sugar, the child gains information necessary for understanding concepts like soft and rough. Some children may need the teacher's assistance to sensitively feel or look at such materials. Joining children in their efforts at sifting sugar with their fingers, or remarking on "how quiet the flour is when you touch it," "how loudly fingerpaint slooshes when you push it," or "how slippery clay is," will help children in their efforts at learning both how materials feel and what they can do.

At an advanced level, the major objective for the IEP is helping children to associate ideas to the way a material feels or moves. The wetness and dip-dip sound of fingerpaint on paper remind one child of rain. The squoshiness of plasticene reminds another child of his/her pillow and mattress. Recognizing the feelings or ideas handicapped children associate or represent in their artwork is not always easy. For example, a rich quantity of ideas were sketched in a picture by a boy named Scott. Looking at the picture, the viewer might have a hard time decoding what the repeated colored, circular forms meant to Scott. Pointing to his picture, he explained:

This is a pig. We got pigs on our farm. Do you know how you get the tongue out of pigs? You cut it out, and you shoot 'em. You take 'em to a guy and he butchers them—and then they come out to be sausage and bacon. Sue, do you like spare ribs and pork chops? I love 'em.

Well this pig is Arnold. Arnold is so fat. He eats a lot. One time I threw a rock in his pen—and he rolls it around with his nose. One time, you know what? We threw the corn husk things into him. And you know what he did? He made a bed out of them!

When we're done feeding him we go up in our garden and see if the peaches are ready. We could make peach cobbler out of them. . . I love those kind of cobbles.

Scott is nine years old. He is partially sighted, and has limited use of his right hand and leg. Obviously, the drawing is a meaningful representation of Scott's world. While instructing Scott in how to differentiate parts of an animal in a drawing (e.g., pointy vs. curved lines), the teacher accepts all of his efforts. Increasingly, some children will learn how to detail people, events, and objects in their work. Other children's efforts will remain more undifferentiated in appearance. Yet, given greater or lesser amounts of detail, symbolic use of the media is still possible for children operating in this advanced level.

CONCLUSION

Through art, educational behaviors in different program areas (e.g., sensory, motor), and with children at different levels of functioning can be realized. Laurie is an eleven year old totally blind girl. As she uses cornstarch, water, and flour, to make a clay-like mixture, she poignantly describes the meaningfulness of the art experience:

Through the art process, the child learns to think, to move, to sense, and to build feelings of awareness, independence and self-esteem.

I need some cornstarch. Can I pour it in? Ooh, this mixture's gettin' heavy. Ooh, neat. It's like clay. I'm gonna get some seeds to put in. I need a scoop for this cornstarch. I don't know how to pour yet. Uh-oh I poured a lot in. It's a big blob in there.

Look how hard my mixture's getting to stir! (She adds a little water.) There, that moistens it up a bit. Would this dry out? I want to see next time. Let's save it. WE COULD JUST SAY IT'S AN ART THING. . . Now I'm gonna start drying it out again. IT'S LIKE CLAY! I CREATED IT!

Whether children use materials in simple or complex ways, artistic play with materials can nurture a sense of inquiry, of delight, and of discovery. As illustrated by the efforts of Laurie and the other children described in this article, as handicapped children use art materials, they learn to think, to move, to sense, and to build feelings of awareness, independence, and self-esteem—as well as creating.

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VISUAL ARTS EXPERIENCES FOR SOCIALLY MALADJUSTED/ EMOTIONALLY DISTURBED CHILDREN

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There are three types of behavior disorders, all of which are outcomes of frustration between the child's capacity to behave and the requirements of the environment.

The child channels negative energies from the impinging emotions of anger, tension and frustration—through banging, pounding, scratching, scribbling—into something satisfying.

Success oriented aesthetic experiences in a here-to-for hostile environment nurture positive feelings about self and that environment.

An appropriate beginning for any discussion of art for socially maladjusted and/or emotionally disturbed children is to clarify the terms used to describe behavioral characteristics, and to differentiate between these and the labels frequently applied to children with social or emotional problems. Hewitt and Jenkins (in Kirk, 1972, p. 391) defined three types of behavior disorders in children: 1) "The unsocialized aggressive child defies all authority, is hostile toward authority figures, is cruel, malicious and assaultive and has inadequate guilt feelings." 2) "The socialized aggressive child exhibits the same characteristics of the unsocialized aggressive child but he is socialized within his peer group, gang, or companions." 3) "The overinhibited child is shy, timid, withdrawn, seclusive, sensitive, submissive, overly dependent and easily depressed." These behavior disorders are the outcome of frustration between the child's capacity to behave and the requirements of his/her environment. Certainly early home experiences and socio/economic factors have a considerable bearing on the child's behavior.

According to Mackie, Kvaracius and Williams (in Kirk, 1972), children who are socially maladjusted display behavior which may be highly valued within the subgroup, but is "not within the range of the culturally permissible" at home, in school or in the community. These children are characterized by having conflicts with parents, teachers etc., having school problems which may retard them educationally due to excessive truancy or suspensions, exhibiting destructive, aggressive and socially immature behavior without much apparent anxiety. Children who are emotionally disturbed are characterized by inner tensions, anxiety and display neurotic or psychotic behavior. These children may have poor, if any, grasp of reality or they may be overly sensitive, dependent, shy or easily depressed.

The special education teacher and art teacher of socially maladjusted/emotionally disturbed children should certainly be cognizant of the many areas of the child's development to which the visual arts experience contributes and, in fact, should focus on those areas which include, but are not limited to, the child's emotional, aesthetic, social and cognitive development.

The visual arts experience should provide children with a forum in which to master those emotions which impinge on their emotional development; i.e., by allowing for release of tension, anger, frustration in a project that requires banging, pounding, scratching, scribbling or the like to achieve a successful end result, the child channels negative energies into something satisfying. By offering tasks which stimulate a sense of self awareness and personal growth, such as creating life images or fantasy characters in drawing, clay, collage or puppetry, the child is supported in an effort to improve self-concept. By providing the non-threatening atmosphere, while still setting limits for control and safety, children can improve their concentration, acceptance of limits, self control and tolerance for frustration.

For the vast majority of children who have experienced constant loss, deprivation and violence, there has been little opportunity for aesthetic awareness and development. It is imperative that special education teachers and art teachers provide visual arts experiences that foster exploration and organization of the child's life experiences. By coupling the positive aesthetic experiences with some negative life experiences, the socially maladjusted/emotionally disturbed child is helped and encouraged to become aware of pleasurable sensations that can be derived from the environment. This allows an

Routines of care and maintenance of work areas, materials and equipment, and interaction with peers as part of the art experience foster appropriate social behaviors.

Art experiences can be designed to provide an inroad to learning.

Often, the types of materials and tasks used can, in themselves, aid in behavior management.

All sincere attempts at the art activity are accepted without criticism.

opportunity to seek new solutions to problems which prevent adjustment. Creating a group sculpture for the local park would prompt these children to feel a sense of pride in a community they previously thought to be assaultive and threatening.

Participation in the visual arts experience necessitates that the child shift from focusing solely on himself to interacting with peers and teacher. The emotionally disturbed/socially maladjusted school child may only tolerate this social interaction for as long as it takes him/her to obtain a particular color or tool or the teacher's aid in proceeding with a weaving project. The special education teacher or art teacher must constantly tune in on the shift to help the child in social development. Even though the art experience may be more casual and tolerant, socially appropriate behaviors should be reinforced while inappropriate behaviors are defused and substituted. Age-appropriate behaviors including communicating, sharing, taking turns, cleaning-up, working independently, and eye-contact should be fostered at all times.

Often the emotionally disturbed/socially maladjusted child appears retarded educationally in part due to excessive truancy or suspension from school and because a child can only begin to concentrate on learning when his/her interpsychic problems are in check. Art experiences can be designed to provide an inroad to learning. Many two- and three-dimensional tasks such as unit designs, collages, sculpture, and weaving reinforce numerical, unit, sequence, and sorting concepts necessary for learning. Map, chart and illustration projects can be integrated with classroom science, math and history lessons. Overall, the art activities should be consistent with, but not limited by, the educational goals established for each child.

The special education or art teacher's ability to manage the emotionally disturbed/socially maladjusted child in the environment parallels the success or failure this child will meet during the art experience. First, the art milieu must be consistent with and appropriate to the behavior model established by the educational setting at large; secondly, the teacher must possess certain qualities: a high energy level, much enthusiasm, a positive attitude, flexibility, the ability to recognize the child's feelings and modulate the regressions, frustrations, anger and amount of "acting out," and an enormous amount of resilience in all situations.

While the teacher provides materials, encouragement and information, limits and structure to insure the success and safety of all children, often the types of materials and tasks themselves can aid in behavior management; e.g., in completing a group mural, peer pressure is utilized to play down negative behavior while stimulating positive social interaction or oversized paper is offered to the child who has poor judgement in determining his/her boundaries and has limited control when working with wet media.

Once the art educator or special educator is familiar with the rationale for including meaningful creative visual arts experiences for the socially maladjusted/emotionally disturbed child, the task at hand is to provide the child with a variety of materials, tools and techniques to stimulate free expression, spontaneity and exploration, and to fill the gaps resulting from his/her handicap. At this point, the teacher must be sensitive to the child's needs and be aware of the child's signals relevant to frustration, loss of interest and need for help so that he or she can intervene before the child fails. All sincere attempts at the art activity are accepted without criticism and each child has an opportunity to share his/her work and seek recognition via the classroom and school gallery.

Materials such as pencils, chalk, markers, ink, crayons, water paints, tempera paints, oil paints, colored paper, tissue paper, fabric, yarn, string, clay, sculptural compounds, i.e., papier mache and sawdust and paste, wood, wire and natural and man-made found objects should be experienced by the child, alone or in combination, in individual or group tasks, such as drawing, painting, printing, murals, collage, sculpturing, ceramics, weaving, and puppetry.

Socially maladjusted/emotionally disturbed students will benefit greatly from opportunities to express those thoughts and feelings impinging their growth through the symbols they create themselves in art. Teachers can best provide such experiences by offering them in a well organized but tolerant environment. The very fact that each sincere solution to a problem is accepted by peers and teachers orients the teaching/learning situation toward success and therefore,

improved self-image and self awareness. The care and use of materials and equipment helps children to conceptualize the need for finding behaviors that are appropriate to various environments. Choice making with a purpose, whether it is as simple as deciding on a medium or color, or as complex as designing the contents and composition of a painting, requires personal organization of ideas and feelings. The child grows socially.

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ART AND GROUP DYNAMICS IN THE CLASSROOM

RONALD E. HAYS

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Some facets of group dynamics and art used by art therapists can be employed by teachers in the classroom.

In human interactions there are two main ingredients—content and process.

With the utilization of art activities all members can participate at once in the expression of personal statements.

Art therapists utilize the inherent therapeutic qualities of art and groups with their knowledge of therapeutic techniques to facilitate change where appropriate with their clients. This article will address the many facets of group dynamics and art used by the art therapist which are felt to be employable by classroom teachers for work with their students.

Although no formal coursework in group dynamics is offered in most teacher training programs, it is the large group, or several small ones—the class—with which the teacher must contend each day. I believe that despite this lack of formal training, teachers have knowledge and awareness of the elements of group dynamics. They see these elements in the following ways in the classroom: diads (the pairing up of children); subgroup formations (the forming of small groups within the larger whole during an activity); emergence of group leaders (the favorite student); scapegoats (least liked individuals); and so forth. With the belief that some knowledge of groups is present, I shall address these and other elements of group dynamics for classroom usage.

People consciously utilize groups for the enhancement of personalities and for social survival. In human interactions there are two main ingredients: content and process. The first deals with subject matter or the task upon which the group is working. In most interactions, including the classroom and the teacher/pupil relationship, the focus of attention is on the content. The second ingredient, process, is concerned with what is happening between and to interacting members (and teacher) while the group is working. Group process or dynamics deals with such items as morale, feeling tone, participation, atmosphere, influence, styles of influence, leadership struggles, conflict, competition, and cooperation. In most interactions very little attention is paid to process even though it is the major cause of effective or ineffective group/class action. Sensitivity to group process will better enable one to deal with groups more effectively.

OBSERVATION GUIDELINES

The following observation guides should help teachers in their analyzing of group/class behavior for more effective teaching of art and other subjects. Although these various aspects of group process are looked at in isolation, it is important to remember that they all interrelate and occur simultaneously.

PARTICIPATION Look for the differences of participation among students. Involvement in the task speaks to participation—Who are the high and low participators? Are there shifts in participation? What accounts for this shift? A changed activity will sometimes bring this about and facilitate followers becoming leaders. With the utilization of art and group art activities all members can participate at once in the expression of personal statements. By subgrouping a class for art activities it is possible to allow more passive members the opportunity to express themselves. By observing what happens in the art process one can readily identify the individual's participation and speak to it accordingly with the individual or the group/class.

INFLUENCE Influence and participation are not the same. We are talking about how one captures the attention of the whole group, and it may be through discussion or the art project. How do members influence one another?

With what are influence issues concerned—leadership, rivalry? Are there shifts of influence? By looking together at the art project, the class and teacher can visualize the influence present. Was the influence of a person or subgroup positive or negative? Was it autocratic/dictatorial or democratic?

DECISION MAKING PROCEDURES After the teacher makes his/her decisions regarding an activity, many decisions are still made by the group. Awareness of this process will assist future planning and structuring of activities for the class. Are the students' decisions checked out with others, or self-authorized? Does the group drift from step to step in the art task or do the students decide what to do next? Are decisions made by majority support or consensus?

TASK AND MAINTENANCE FUNCTIONS The preceding elements all strongly affect this area. Here, we are concerned with the behaviors which get the task accomplished and the quality of that job. Are suggestions made within the group concerning how to proceed? Is the task summarized by anyone? Who keeps the group in focus? Who helps others get involved, or cuts off others? How are ideas accepted, rejected, or clarified? What support is offered to members of the group?

GROUP ATMOSPHERE If three groups are formed within a class for an art activity it will be possible to visualize, in the resultant art, the atmosphere and feelings present within those three groups and chances are they will all be different. By shifting group membership the teacher can assist and meet the various needs of students within his or her class. Who needs or facilitates a pleasant, conflictual, sluggish, or affectionate atmosphere? Which individual or group illicit feelings or atmospheres of anger, irritation, frustration, warmth, excitement, boredom, defensiveness, competitiveness, etc.?

NORMS In this discussion of some of the basic areas of group behavior/dynamics/process, we need to note how, after one has established the rules (norms) for the group and task, the group continues to restructure and add to the norms. The purpose of the norms is to control the members of the group; all groups add to the written or spoken rules with their own unwritten or unspoken norms (groundrules) for participation. These norms may be clear (explicit) or only sensed (implicit). Important to note is the fact that some norms foster group progress or completion of the activity while others hinder it.

LEADERSHIP This one area can have great influence over all the preceding areas that I have suggested a person observe. Here, I am suggesting that teachers look at themselves and their behavior rather than the behavior of the pupils. The various roles a leader may take will all strongly affect the outcome of the group. Different groups/classes and different projects call for varying leadership roles. What happens in a class when you switch from an active to a passive role? When you begin to withhold versus continually giving, does the group become resourceful, or fall apart? Do you lead by example/behavior versus words? I am not saying any one role is better than another for the conducting of art activities. What I am suggesting is that one needs to be aware of the role he/she has taken and to see if variations of that role will yield differing results.

PROVIDING STRUCTURE

Observations of the preceding aspects help the teacher to assess the group and to provide greater or lesser amounts of structure in the group formation, the task, and the art media used. Structure in these three areas is essential for the optimum functioning, learning, and creativity of the group.

The nature of the classroom population and physical environment will affect the teacher's decision as to the best size and formation of the groups. Accordingly, no definitive group size will be offered as, in addition to the aforementioned elements, the class' and teacher's experience with groups will also determine the size. A structure of any degree or kind can be provided depending upon the group's needs at any given point. It will be different for

Understanding the dynamics of the group process can assist teachers in providing art experiences that promote effective interaction.

The various roles a leader may take will all strongly affect the outcome of the group.

beginnings, midpoints, and endings of group sessions. There are art activities, materials and themes that are good for warmups and closures. The important thought to keep in mind is that the class must be addressed as a unit in determining its capacity for stimulation when you begin to form the groups and structure the art activities. One of the main reasons for this is the fact that any group will heighten the intensity of feelings present within an individual.

Art work done in a group can be viewed as equivalent to other group work; it addresses and offers us the opportunity to observe those skills needed for participation in society. Art, as a form of non-verbal communication, affords all individuals the opportunity to "speak" (even all at once without chaos) in a group. The resultant art product of an individual or group allows us to visualize, in a concrete fashion, the aforementioned processes/behaviors that occur in all groups.

When structuring groups for art experiences, one has several options. For example, one can provide theme centered art activities in which pupils work together around a theme (Spring) yet independently at their own desks. Or they may work in diads or small groups around a theme, then contribute their offerings to the larger whole of the designated final product. This is a good way for children to see how their individual work can contribute to a larger whole, a group. Perhaps the ultimate group project is a mural. It can be undertaken by individuals adding pieces to a provided "background" focusing on a particular theme, or it may be entirely student created with all students working directly on the mural. This latter project usually only comes about after the teacher has a good understanding of his/her class and the class has a good feeling for group work.

Structuring the art experience is a must as it provides a framework for creativity and personal self expression. Structure offers security, yet it can be limiting and restrictive; the "art" is to establish the right amount for optimal performance by all students. Inasmuch as our focus should be on the process of art making and not on the attempts to produce a "work of art—masterpiece," we should address the aspects present within the resultant product that relate to the individual or group. Did the activity allow for sharing, communication, socialization, similarities, differences, etc.? This can be seen in the subject matter, lines, colors, shapes, moods and style. It is also possible to address spatial concepts such as: above, below; left, right; close, far; touching, not touching.

Art shared in a group allows for the sharing of images and the testing of reality with others. We all think in images, but we do not speak in them—art affords us opportunity to do so.

Through the art media we may organize the group for maximum involvement and growth. This is because the various art media have their own inherent structure which exists along a continuum from least (unstructured-regressive) to greatest amount of structure. Caution—this is not to say unstructured media should not be used, it is just a question of correct timing. Some art materials are more appropriate than others for particular students and/or tasks. Structure is determined by the relative shape and permanence of a particular medium. If it has a well defined shape of its own and is rather permanent when used, it is regarded as having more structure. Even within areas of media, such as drawing tools, structure is apparent from greater to lesser amounts, e.g., ink pen, pencil, crayon, oil pastels, and pastels. It is possible to provide external structure to the most unstructured medium with a task and/or technique. But it is important to realize the fact that the structural qualities of media will affect both the art and group process. For example, a very controlled group given paint in an unstructured activity might regress and become unruly because of the regressive, unstructured nature of paint. Yet the same group using the same paint in a structured activity will produce completely different results.

Using different media can result in differing images and messages. This is largely dependent upon the qualities of the media (its shape, texture, color, movability, size, taste, visual appearance, etc.), the technique or task suggested by the teacher and the desired outcome for the persons in the group.

It is hoped that this article has clarified some of the skills regarding groups that most teachers have developed as part of their "on the job training." Perhaps as a result of clarifying issues and making the observations suggested within this

A group will heighten the intensity of feelings present within an individual.

Structure provides a framework for creativity and personal expression.

Art shared in a group allows for the sharing of images and the testing of reality with others.

The inherent structure of an art medium must be considered in the planning and implementation of an art activity.

article you will be able to utilize group and art knowledge toward more effective functioning within your classroom. Since we already tend to focus primarily upon content, this added focus on process should serve to compliment one's teaching and complete the "recipe" for effective human interaction.

ART: MANY OPTIONS FOR CREATIVE ACTIVITY

CHARLES BATTAGLINI & NED WERT

CHARLES BATTAGLINI, a printmaker, and NED WERT, a painter, are Assistant Professors of Art and Art Education at Indiana University of Pennsylvania. Together they directed an ESEA Title III project, "Multiple-Image and Sound Motivational Environments," in which they developed their innovative techniques with media. They have shared their processes and products via presentations at state, national and international conferences and with groups of teachers who serve normal, gifted and handicapped students.

Handicapping conditions do not negate a child's need to express him/herself or to enjoy art experiences.

Drawing and painting are the initial art activities experienced by most children.

Drawing and painting media combine easily to provide a vast variety of experiences.

Handicapping conditions do not negate a child's need to express him/herself or to enjoy art experiences. They may, in some cases, limit the variety of materials or tools used, or the specific art areas to be experienced, but there are still many options available. The suggestions offered here are not to be considered as comprehensive, but rather as examples of the many possibilities.

DRAWING & PAINTING

The activity of drawing or painting is the initial art experience for most children, often introduced in the home by the parent. It is a basic artistic expression of all children as they advance through the natural developmental stages. It is important for the teacher to recognize and respect the products of each stage and not to use adult standards when evaluating the drawing and painting abilities of youngsters.

With the variety of drawing and painting tools available, the teacher is challenged to provide many experiences which stimulate the child. Some of these materials and tools include wide felt-tip markers, tempera paint, brushes; all of which flow easily and require little hand-pressure to manipulate. The colors are bold and exciting for children. Chalks, pastels and oil crayons, although somewhat messy, provide good color. These can be frustrating to children who have not learned or are physically unable to control them.

Detailed drawings are best accomplished with pencil, ball point pens and felt pens. Pen and ink drawing requires skilled manipulation but is a fascinating medium for the child who loves to express detail.

Watercolor is a painting medium available in most schools but it should be noted that it is not as immediately accessible as tempera paint due to the necessary wetting of each pad of color.

Charcoal, a one time popular drawing medium, is seldom appropriate for young children; children tend to become frustrated as they drag their arms and sleeves through the drawing and often use the tool as they would a black crayon. Specialty materials include fluorescent crayons and paints, Payons (water soluble crayon sticks), colored pencils, and colored inks.

Drawing and painting media combine easily to provide a vast variety of experiences. These activities, referred to as mixed media, are easily explored by teachers and students. Watercolor painted over wax crayon drawings creates interesting "resist" effects on paper. Felt-tip markers combine with paints—water soluble markers on damp paper produce beautiful, fluid drawings. Ink drawings can be "tinted" with pastel watercolor and so on it goes as we explore these tools and materials in combination with one another. Many art technique books are available to the classroom teacher which explain procedures in step-by-step outlines while keeping the process simple.

The surfaces used for drawing and painting are just as varied as the media to be applied to them. While paper is the most common surface and is available in a very wide assortment of kinds, sizes, textures, and colors, the child may draw or paint on cloth, wood and other non-paper surfaces. The kinds of paper available in school supply catalogs range from smooth surfaced papers (mimeograph and duplicating papers—excellent for pen and ink or marking pens) to slightly toothy or textured paper (Manila, bogus, oatmeal—which are very compatible with crayon, oil pastels, pastels and chalks, and water color or tempera paint). White drawing paper is a versatile surface for most media. Other papers might

include tissue, velvet, metallic, fluorescent, construction, poster, and butcher paper. The compatibility between paper and media should not be overlooked by the teacher.

SCULPTURE

The creation of a three-dimensional object, either realistic, semi-abstract, or non-objective can be defined as sculpture. We will refer to it here as a non-utilitarian (non-functioning) object in order to separate it from the crafts. Sculpture is created by modeling, casting, carving, and constructing from many materials including scrap and/or "found" objects. The processes and materials vary with each type of sculpture—the manipulation skills and physical coordination of the child will dictate those which are best for him/her.

MODELING The quality of modeling materials makes them a very expressive medium for children. The squeezing, rolling, pounding, gouging actions needed to manipulate the materials are natural operations for most children. Some students may need guidance in exploring the qualities of the materials. Young children often establish three-dimensional symbols not unlike those suggested in their drawings and paintings—wads and coils become "circles and lines." As children mature, their three-dimensional skills improve and they can often express an idea in modeling which they cannot express by drawing and painting. There are many materials that are appropriate for the modeling process, such as: earth clays, self-hardening clay, plasticine, papier mache pulp, snow, wet sand, and baker's dough. Spatulas, wooden clay tools, and other gadgets can be used to shape the sculpture and to add texture and design.

CASTING Although there are numerous steps in the casting process from beginning work on the mold to producing a finished product, there is a magic about it that is attention holding. Negative molds can be made most easily from plasticine clay or wet sand because these molds can be removed from the positive plaster of Paris cast after the material is set. Low relief (shallow) molds are most successful because of the amount of plaster needed to fill them—considering the rapid setting time of mixed plaster of Paris. Tooled impressions into the negative mold produce raised surface designs and details on the positive cast. Because the pouring of the plaster is a delicate procedure (so as not to destroy the child's tooled design), it is best performed by the teacher, an aide, or an older student. If this process is attempted with a large group, it will be necessary to pour only a few molds from each newly mixed batch of plaster.

CARVING Because of the tools involved—files, rasps, knives—the carving process to produce sculpture should not be attempted with any child who does not possess good coordination skills. However, it is especially appealing to older students (adolescents), who have the patience to involve themselves in a more lengthy sculpture activity. As the tools suggest, it can be a dangerous activity which needs to be done under careful guidance. Suggested materials for beginners include: soapstone, balsa wood, soft wood, hardened plaster and salt blocks.

CONSTRUCTING Construction sculpture is, by far, the three-dimensional process most often used with school children. Many materials are available, for example: cardboard, wood scraps, toothpicks, boxes, "Plastcraft" (plaster impregnated gauze), wire, scrap materials, styrofoam. This wide variety of materials, many at little or no cost, makes construction an especially attractive activity. Children's abilities adapt easily to this assembling procedure and success is practically guaranteed for all children as they "build" their idea. The constructed sculpture may be covered with a unifying surface of papier mache or Plastcraft or left to reveal the materials from which it was created. Although it is not necessary, many children enjoy painting their completed sculptures, choosing a realistic treatment or solid color with sponged or spattered textures over top to produce very original "patinas" (final "aged" surfaces in sculpture).

Sculpture can be created by a variety of processes—modeling, casting, carving or constructing.

The vast array of sculpting materials available provides many options for selection based on the students' manipulative skills.

FIBERS/FABRICS

Creating functional or nonfunctional objects with fibers and/or fabrics combines the tactile experience with the visual.

Although typical materials include a wide variety of yarns, in recent years, the expansion of this art form has grown to include materials not previously associated with fibers and fabric design. Ropes, twines, wires, strings, ribbons, etc. give students many more options in their creative endeavors.

This art area includes numerous activities such as weaving, tie-dyeing, stitchery, fabric collage, macrame, rug making, quilting, batik, and many more, including combinations of various processes. Five such activities are presented as starting points.

WEAVING Traditional classroom methods of weaving utilize lap (frame) looms and cardboard looms to produce flat weavings that become mats, scarves, wall hangings, etc. More experimental methods could include weaving non-traditional materials, such as dried weeds, straw, rope, raffia, large seed pods, into the warp which may be strung on a tree branch or from a wooden spoon. Substitutes may also be used for warp; weave into hardware screening or chicken wire. Paper weaving is a simple way to introduce terms and procedures, or colorful strips of cloth can be woven into a giant warp suspended from a bulletin board for group participation before the students work individually.

FABRIC COLLAGE To a firm base (cardboard, masonite), glue various textured and colored fabrics in either a realistic or abstract manner. Yarn or string may be used over patches of solid or printed fabric to produce linear forms or additional textures.

RUGS For hooked rugs, continuous lengths of yarn are punch-hooked into the fabric in loops. A hoop or frame is usually necessary. Latch hooking is another method for making rugs which may be easier for some students to manage. Short segments of yarn are individually knotted with a hooking tool to the fibers of monk's cloth or to plastic webbing, creating a shag texture. For children with little patience, small sized "rugs" can become chairpads or wall hangings. In either case, the child's original design is easily transferred to the backing with felt markers.

BATIK The batik method of decorating fabric has a close association to painting. Melted wax (a mixture of beeswax and paraffin) is applied with brushes before it is put into the cold dye bath. The crackled wax produces beautiful linear designs throughout the piece. The dyeing procedure may be repeated several times—always starting with the lightest color first and progressing to darker tones. The wax is removed from the cotton fabric by ironing between newspapers and then dry cleaning, if necessary. A more simple process of batik is to drip candles onto white or light colored cloth. The drops of wax can be used to produce either random designs or massed to create larger, more complex images. Obviously, the use of a lit candle necessitates careful supervision. The dyeing of the cloth is identical to that of traditional batik. Another adaptation for younger children may be done by drawing heavily with wax crayons onto pre-washed fabric. The cloth drawing is dyed a dark, contrasting color (black, navy blue, purple). The fabric is then ironed between newspapers and the wax leaves the fabric allowing the color from the crayon to remain in contrast to the dark, dyed background. This process is called "crayon batik."

STITCHERY Abstract, non-objective or realistic forms can be stitched into coarsely woven fabrics, such as burlap, to produce wall hangings or decorations for functional objects. Traditional stitches may be taught to the children, however, personal exploration and invention should be encouraged. Even young children can be introduced to stitchery by using large blunt needles and yarns having adequate thickness and strength. Adult concepts and standards are not required to produce a charming child-like stitching technique. Consider the following display and function alternatives: a banner that is pieced together from several students' efforts; a quilt-like project that groups together the work of an entire class; pillow covers; a wall hanging stretched over a cardboard

backing with hanging apparatus attached.

MEDIA

In art, we usually define media as materials such as crayons, tempera paint, watercolors. The use of the word media in this section will refer specifically to the use of machines (record players, slide projectors, overhead projectors, etc.) and software (records, slides, transparencies, etc.). Media can be used in many ways: 1) as motivation for an activity—a film, a record with a series of slides based on a common theme; 2) as an art lesson in itself—slide making, organizing slides into a visual sequence, adding music to the slides or finding new music for a silent film; 3) as a projected visual background for related arts activities—art, creative writing, music, drama, movement—e.g., colored acetate on several overhead projectors produce a colored light environment in which children produce wall shadows.

At a very early age, the overhead projector may be introduced as a machine to project light and shadows. After some important instructions as to the use of and respect for the machine, children will delight in placing opaque objects of various shapes and sizes on the light table of the overhead. Translucent or transparent objects may also be collected and used. Objects such as clear packing materials, six-pack plastic holders, twigs and leaves, etc., project most effectively, or shapes may be cut out of dark construction paper and moved around. For an added area of exploration, sheets of colored cellophane or acetate can be placed on the overhead table.

Short shadow stories can be verbally and visually organized by the child by cutting shapes from paper to project shadow images and telling stories relating to the pictures. A discussion of positive and negative shapes may be necessary for the child to realize that a hole cut into the paper will permit light to pass through. Again, colored acetate or cellophane over the entire table area will provide an added element. And as with most use of media, the darker the room can be made the brighter (and more effective) the lights will appear to be.

Slide making without a camera is another area which can be introduced early in the child's education. Slide making can be a completely success-oriented activity when we eliminate the traditional attitudes and criteria of a projected transparency and enjoy the activity in its simplest forms. Typical introductory methods might include:

1. HAND "DRAWN" SLIDES These may result in "abstracts"—designs of form and color which, when projected, become exciting experiences when a student's personal miniature (2" x 2") work of art is blown up on a projection screen for everyone to see and experience. Slide mounts, purchased for very little cost at most photography shops, are fitted with two small pieces of clear acetate which fit into the non-adhesive areas of the commercial slide mount. On one of these pieces the student distributes color (i.e., bottled glass stain available from a hobby supply source, permanent felt tip color, bits of colored acetate or cellophane). The art work is then sandwiched with the second small piece of acetate and the slide is folded over and sealed with a medium hot iron. (This can be done by the teacher or a helper with children who do have the necessary manipulative skills.) There is a very special joy in seeing the original miniature blown up by means of a slide projector into a bigger-than-lifesize piece of art work. Children will willingly discuss the aesthetic and sensitive qualities of each other's work and give reasons for their opinions. The teacher, to lead the discussion, need only ask questions such as "How does this slide make you feel?"—"What do you think the artist (student) was thinking about when he/she made this slide?"—"Does this slide remind you of . . . a food; a season; a symbol or sign?"—"Why?"—"Who could create a story to share with all of us that would go along with what we see up there?"

2. SCOTCH-TAPED SLIDES A variation of the first idea is to cover one side of the slide opening with Scotch tape—sticky side facing to the topside. To this sticky topside surface in the slide opening press small materials that will be interesting when seen on the screen (i.e., string, yarn, cellophane and acetate for color, grasses, salt, etc.). Now cover the exposed sticky surfaces and newly

Art techniques can be applied to the utilization of visual projection and sound equipment providing opportunities for innovative aesthetic expression.

Various printmaking processes—relief, intaglio, stencil, and lithography—provide numerous alternatives for interesting and creative art experiences.

added materials with more Scotch tape sandwiching the materials between the tape. The slide may be sealed with a warm iron or the slide mount may be divided (cut in two) at the fold, producing two slide frames.

As with other activities, children will explore their own ideas and find ideas that "work." This exploration can lead into a discussion of technical limitations and aesthetic qualities.

PRINTMAKING

A print is an art work made from one of the printmaking processes—relief, intaglio, stencil, and lithography. The printmaking process has a direct relationship to drawing and/or painting with the exception that the art image is first made on a plate or screen and then transferred to the paper. It becomes a wonderful way to introduce children to another art process while having them become aware of the effect the material has upon their final image. Children can be introduced to at least two of the four processes at a very early stage in their development—the relief and the stencil processes.

RELIEF PRINTS This process is most widely known for wood cuts, wood engravings, and linoleum block prints. The child, however, has already created a form of relief print even before entering school—a foot print on a clean floor or a hand print or finger print on a wall surface is, in effect, a relief print. A simple and nonthreatening introduction to this process might even include the young child creating a picture by stamping finger prints (inked on an ink pad) onto a sheet of paper. Since the process involves the inking of a raised surface (as in fingerprint), any number of objects that can be pressed to paper could be used to produce a simple relief print. Some examples:

1. Gadget prints—objects with one flat side (spools, bottle caps) are inked and pressed to paper. The shape is repeated.
2. Stick prints—strips of cardboard are cut, paint applied to one edge, pressed to paper, and repeated.
3. Glue prints—glue (preferably white glue as airplane glue fumes can be hazardous), is trailed onto a sheet of cardboard. This is allowed to dry, rolled with ink and printed.
4. String prints—string may be laid over a trail of glue, and when dry, inked and printed.
5. Wood block prints—scrap wood shapes (from a local lumber yard) may be inked and printed as is, or can be scratched with a nail to create a type of wood cut.
6. Styrofoam plate prints—meat packing trays (with the raised ends cut off) can easily be indented with a variety of tools including a pencil.
7. Cardboard prints—pieces of heavy paper or cardboard are cut into shapes, glued onto another piece of cardboard, rolled with ink and printed.
8. Linoleum block prints—since this process involves a control and pressure in cutting with sharp gouges into linoleum (to remove areas not to be printed), it is most safely used with children who do have manual control. Even then, the danger element of the very sharp cutting tool needs to be stressed along with proper and safe use.

With the exception of the linoleum block print (and perhaps the control needed to lay string on glue for the string print), each of the relief processes listed could be introduced to children at very early stages in their development. An awareness of a print as an art work which can be repeated can be emphasized.

Inking of relief prints may be done by brushing paint onto the plate as with the gadget or stick print, or by rolling ink from a brayer onto the plate. The inking and printing become another process to be learned if it is important that the children become aware of the need for craftsmanship in the inking of their already created plate image.

A variety of papers can also be introduced as a printing surface. Although the more porous papers (newsprint, construction paper, Manila paper), receive ink well, inexpensive mimeograph paper can make an excellent surface. Colored ink on colored or black paper can also provide a welcome variety for exploration.

STENCIL PRINTS

As with relief printing, this process can be introduced rather

early in a child's development—actually as soon as the child can fold a piece of paper and cut a shape (hole) into the paper. Unfolded, the paper surrounds the cutout shape and functions as a stencil. Crayon, chalk, felt marking pens, or tempera paint applied with sponges can color the shape which can be repeated. (Note: the children will probably discover that the cutout shape also serves as a stencil.)

Stencil paper (a heavy waxed paper) can be cut not only with knives but also by drawing into the paper with a sharp point. Compass points and large needles can work to cut large shapes into the waxed paper which can then be pushed out and printed as above.

Later this type of printmaking could lead into simple silkscreening which is a refinement and extension of the stencil process.

INTAGLIO (etching, engraving, drypoint). Although this process traditionally has been performed on metal plates and usually needs a printing press, an adaptation of this sophisticated and complex process can be introduced to an older child. Basically, the intaglio process is the opposite of the relief print—the ink is forced into engraved or etched lines, the surface wiped clean and the paper forced (usually by the printing press) into the etched lines, picking up the ink.

Adaptation #1: The plate is a sheet of stencil paper. Lines are drawn (scratched) through the waxed surface with a sharp tool (needle or compass point) removing the wax, but not cutting through the paper. Drawing ink is quickly brushed onto the lines and a sheet of absorbent paper (Manila) is laid over the plate and gently rubbed. This process is based upon the premise that water (the ink) and wax do not mix. It is a very primitive method of dry point, but one that produces charming results.

Adaptation #2: The plate is a sheet of acetate or thin plexiglass. This drypoint method involves scratching the lines into the plate, rubbing an oil based printing ink into the lines and wiping the surface clean. The ink should remain in the lines if they have been scratched deep enough. A sheet of dampened paper is laid over the print and it is run through a press. It is possible to print by hand (without a press), but the result may not be as clear. This also involves the use of mineral spirits for clean-up. Although this adaptation most approximates dry point on a metal plate, it is obviously best saved for older students.

The activities in this section have been included only as suggestions for creative art experiences. Many are adaptable to individual situations and these adaptations are encouraged so that teachers may be successful in the initial encounters with arts activities with handicapped students. Activities can be used in part, singly, or in combination to create motivational "themes" for students. The intent in this presentation of options has been to provide general guidelines so the teacher will feel free to use his/her own creative ideas.

The introduction of new materials and processes will often liven a lesson and serve to increase enthusiasm, participation and learning. It is important to remember, however, that experimentation and manipulation are necessary parts of the art process whenever new tools or materials are encountered. It should be noted that, as a result of repeating an art technique, the child will experience greater freedom for imaginative explorations. Teachers as well as students can have exciting experiences as they become involved in "new" options included among the many art techniques discussed here.

Experimentation and manipulation are necessary parts of the art process whenever new tools, materials and procedures are encountered.

Students need opportunities to try many art areas, processes and materials, but they also need time to perfect their skills in each so they can experience greater freedom for imaginative exploration.

DANCE

GROUP DEVELOPMENT AND SOCIALIZATION THROUGH MOVEMENT

by Emily Samuelson

...describes group movement activities as avenues for increased awareness of the self in relationship to others.

DEVELOPMENTAL MOVEMENT AS A TOOL FOR TEACHING THE HANDICAPPED

by Bonnie Carpenter

...outlines the path of "normal" development of movement skills to facilitate the teacher's recognition, understanding and treatment of special students' problems.

COGNITIVE DEVELOPMENT AND MOVEMENT

by Lillian Thierry

...focuses on movement as an expressive medium which integrates cognitive, social, physical and emotional development.

CREATIVE DANCE/MOVEMENT: IN SEARCH OF GOALS

by Jeryl Quinn

...supplies guidelines for activity structure, behavior management as well as a variety of objectives.

MOVEMENT: SOME IDEAS FOR GETTING STARTED

by Sheila Bridges

...provides practical and encouraging teaching and learning activities for the interested but "non-artistic" teacher.

CREATIVE DANCE/MOVEMENT IN SPECIAL EDUCATION: A CASE IN POINT

by Elise Billock Tropea

...tells the story of "Jason," a student who had a special experience when a creative dance/movement consultant conducted several sessions with his class.

GROUP DEVELOPMENT AND SOCIALIZATION THROUGH MOVEMENT

EMILY SAMUELSON

EMILY SAMUELSON is a registered movement therapist with a Masters degree in Psychoeducational Processes (group dynamics). She is currently the Coordinator of the Creative Arts Therapies at Thomas Jefferson University, a consultant in the Arts in Special Education Project, and on the faculties of Hahnemann Medical College and Antioch/New England. She also maintains a private practice and lectures occasionally. Ms. Samuelson has extensive experience as a movement therapist working with emotionally disturbed and mentally retarded children through her internship with the Department of Mental Health in Boston and her work at the Woodhaven Center in Philadelphia.

Through group movement, special needs children can join together in a less threatening way than in many other types of group interaction.

A movement session can be as varied as the imagination of any group member.

For each of us, part of our identity as a human being comes from our involvement in groups, whether in families, classrooms, or the workplace. From this involvement, we become more aware of the many facets of who we are, the different roles that we can play, the effect we have on others and a wide variety of human expression and experience. A sense of belonging, of connectedness to others, is an integral aspect of our feelings of security and identity.

For many special needs children, group interaction is a stressful and frightening task. Children may feel lost in the shuffle of so many people, unable to get their share of attention, or confused about personal boundaries. Through group movement, children can join together in a less threatening way. They have opportunities to explore different roles, to learn new behavioral options from observing others, and, most importantly, to experience pleasure from interaction with others. "A child's growth and development happens when he is engaged with other people in activities that bind the child and others in mutually fulfilling ways." (Lichtenberg, 1971) When the experience of moving is one of spontaneity and pleasure, a healthy ego is in operation.

The structure of a movement group is an important foundation for group-building. The spatial format, opening and closing rituals, and the use of props can all contribute to creating an experience that is emotionally safe for its participants. Its explicit boundaries provide both containment of impulses and a clear definition of a group as a unit rather than an aggregate of individuals. In addition, boundaries provide an orienting point for each member to maintain a sense of psychological space in the group. For many known and unknown reasons, the circle has special meaning for people. It is the symbol of unbroken togetherness and unity and can be a helpful place to begin a movement group. A circle of cloth or an elastic hoop can be a tangible symbol of group cohesion. With a prop, the connection between members is underscored without the threat of direct physical contact.

A good beginning is of great importance. It provides an orienting anchor point for a group. Each teacher will discover openings which feel comfortable for the leader and the group. The variety is endless. A ball can be passed around while students say each name as the ball arrives. This simple task defines the group membership, develops relationships, requires the use of memory, and focuses members both visually and spatially.

Another possibility is to have each child call out the name of a body part to move or pat rhythmically in unison with the group. The kinesthetic experience, the self-touch, and the observation of other children can help the child discover how each body part fits into the whole schema of a human body. This enables the child to explore body boundaries and define his/her body image. With a more complete sense of self, it is easier to then relate to others.

Still another opening is provided by rhythmically clapping group members' names. This establishes each child's separateness while the structure of rhythm establishes a group sense. There are many others.

The bulk of a movement session can be as varied as the imagination of any group member. It is an exploration of who we are as individuals and what we are as a group. The leader may choose to focus on particular cognitive issues, ego-skill building, or facilitation of the emotional climate of the group. By moving with others in a group, the child can explore different concepts both kinesthetically and visually. For example, the simple task of moving arms up and down as a group can accomplish several goals simultaneously. Each child is kinesthetically

experiencing the spatial concept of "verticality" (up and down) while observing the concept in the actions of other group members. This enables the child to self-correct. The child is also learning through play. The pleasurable acquisition of skills and concepts can stimulate creativity and curiosity—two of the most basic prerequisites for learning. Finally, the child is learning to adjust his/her behavior to the rest of the group, to work cooperatively and in unison with others.

Whenever groups of people assemble, there is some kind of feeling tone which permeates the group. It may be anger or sadness or fear or any number of the array of emotions we all experience. At times it seems as though a group is telegraphing its emotional climate through non-verbal behavior. A group leader may choose to facilitate this climate by moving in ways which reflect the group's feeling tone. By responding sensitively to the movement cues of the group members, the leader can help the group feel more comfortable in expressing feelings in safe and appropriate ways. If, for example, a group "feels" angry, then stamping, punching into the circle, or pulling on a piece of stretchy cloth may help the group to release pent-up feelings.

A group often seems to be particularly conducive to emotional risk-taking. The support of peers can add the ego strength necessary to directly express feelings which might otherwise be manifested in acting out or withdrawal. A group can therefore be a safe place to explore who we are and how we feel—a place to develop a more complete sense of the range of emotion and expression.

In moving with others, a child learns some of the realities of social interaction. One of the most powerful social learning experiences of a movement group is the exchange of leadership roles. Everyone in the group can have a chance to be "leader" by showing a movement for the rest of the group to follow. Leading gives each member a moment of power in his/her environment, something which is all too frequently absent in the life of a child. The social learning involved in taking turns, waiting, observing and following others has an impact on the larger social sphere of each child.

A group moving together in rhythm or synchrony is communicating a very special message. Each member is saying, without words, "I am a part of something larger than myself." Indeed, each child can experience him/herself as part of the group and, symbolically, a part of the human community. The group also becomes a tangible social reality in which each child can adjust his/her self-image as it is mirrored in the reactions of others. New social roles can be tested as the child has the opportunity to give and take in relationships. Within the context of a supportive group, the withdrawn child may feel safer to move with strength and assertiveness, the hyperactive child to slow down in order to join the group, the aggressive child to move with gentleness.

Every child has something to offer a group and, with support, can discover that potential. Even the most withdrawn child is always moving. The blink of an eye, the inhalation of a breath, the twitching of nervous fingers are all movements. Regardless of the ability level of the group or individual, a sensitive leader can facilitate some kind of movement interaction which has meaning for members. Frequently the playful aspect of movement can stimulate the child to include him/herself in a group. Passing faces around the circle gives children a chance to playfully explore different feelings and their outward expression. Moving to different vocal sounds can be silly or serious. The growl that accompanies a stamping foot allows the child to express underlying anger in a safe, supportive, and accepting environment. Fantasy play can stimulate creativity and self-expression. Given an imaginary and very magical box, each child can reach in, pull out something he/she wants and show the group, without words, his/her special wish. The sharing of imagination and the symbolic fulfillment of fantasies can be a trust-building experience.

Shared laughter joins people together in the here-and-now of pleasurable experience. Within that is the promise that the struggle of getting along with others is truly worth the effort.

In moving with others, a child learns some of the realities of social interaction.

Regardless of the ability level of the group or individual, a sensitive leader can facilitate some kind of movement interaction which has meaning for members.

Within a pleasurable movement experience is the promise that the struggle of getting along with others is truly worth the effort.

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DEVELOPMENTAL MOVEMENT AS A TOOL FOR TEACHING THE HANDICAPPED

BONNIE CARPENTER

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Becoming familiar with the stages of development and behaviors characteristic of various ages can help both parents and teachers to understand the emotional and physical processes through which children pass.

We need to be able to read the messages that children in trouble give us, and many of these messages are given through the body, through movement.

What does a knowledge of developmental movement have to do with teaching the handicapped? This is a question which certainly bears some explanation. Becoming familiar with the stages of development and behaviors characteristic of various ages can help both parents and teachers to understand the emotional and physical processes through which children pass. When we know the path that growth follows, we are better able to recognize individuals who are having difficulties with that path. We can then quickly intervene and guide the child in a direction which is of the greatest benefit to him/her emotionally, socially and physically. We need to be able to read the messages that children in trouble give us, and many of these messages are given through the body, through movement.

Infants, at birth, have no way of communicating with the world, except through their bodies. They wriggle about, cry, reach, grasp, push away, and their caretakers must learn to understand what they are trying to say, and find ways to answer their questions and fill their needs. As infants grow into adulthood, they acquire other ways of making their needs known in the world. They begin to control their movements, their eye contact, and finally their words. They make relationships with people and objects and become aware of what is happening in the world. They progress from using their bodies as the only mode of communication to using words as the primary mode, and movement becomes an adjunct.

But what if the child does not develop precisely in this manner? What if the use of language is not proficient and emotional communication is difficult? Other methods of specifying needs and feelings must be used. Movement is one of these methods. There are certain types and categories of movement which are characteristic of any individual at various developmental levels from birth through adulthood. Various kinds of movement seem to be used to express certain needs and desires. Understanding this communication may be one way of initiating a relationship with a child for whom language can not be the primary mode of interaction.

The descriptions here will draw a general picture of the development of the individual. Remember that this is not a prescription of how development should progress for every child. All children will follow basically the same path, but they will not all walk the same way.

The infant, at birth, is in a state of disequilibrium. Physical functions have not yet stabilized, and movements appear disconnected and random. Fists clench and unclench and feet thrust out in response to random neurological firing. Little sustained energy is directed toward the outside environment at this point; the primary task of this developmental stage is to attain homeostasis. However, the observer may notice that the infant will appear to stare at one object or gaze in several different directions, paying attention, although briefly, to various aspects of the world.

The world is introduced to the infant through the mouth and through the touch of a caretaker. He/she is fed, clothed and changed, cuddled and carried, and through these actions the caretaker will communicate the degree of security that this infant will come to expect. As the infant explores this new world through the mouth, the observer may see sucking movements and rhythms throughout the entire body.

As the infant reaches the age of one month or more, the fist is discovered. When thrust into the mouth, the fist gives a degree of satisfaction. This incident,

Understanding what the child is communicating through his/her movements may be one way of initiating a relationship with a child for whom language cannot be the primary mode of interaction.

Basically, children follow the same path in movement development, but they will not all "walk" the same way.

which occurs randomly at first, will then be practiced until the child can control these movements which give pleasure. Once it is perceived that certain movements relieve tension, the movement is practiced until it is perfected. Many skills will be acquired in this way during the first six months of life.

During this time the child primarily lives on a horizontal plane—that is, the child lies prone or supine and cannot voluntarily change position. Needs are communicated through crying and feelings are shown with the body.

Within the first six months, most children will learn better how to communicate and satisfy needs, will make eye contact with the world and explore their own bodies. As first teeth erupt, they will bite and, as an extension of biting, grasp objects. They will also sit, although only for a few moments, and thus can see their world from a new vantage point. As they gain more mobility they will pull, grasp and pluck, grab hair and clothing, and stretch back to gaze at people's faces.

Locomotion changes startlingly. Through push and roll motions, children turn over and obtain still another view of the world. Once the ability to turn over at will is accomplished, they can then proceed to the business of creeping and crawling; taking themselves, to a certain extent, to where they want to go. As they become more proficient at this, about the end of the first year, they bounce up and down, preparatory to standing and walking. As they practice, their body shape also changes, and they become more vertical. When children do actually stand up, it is with feet wide apart and arms stretched out, wobbling from side to side in their first independent steps. They can now confront the world and show what they want.

When children attain verticality, their behavior changes accordingly. They have achieved a degree of independence and make their demands known. They may have temper tantrums, throw objects and communicate through movement and word that they have vociferous objections to some aspects of their lives.

This is a time of experimentation with new-found abilities for controlling body weight. They pick up, push and pull light and heavy objects, toss and drop anything that comes within reach, often driving parents to distraction. They learn to pick up a ball of sand without dropping it, and a feather, without crushing it. They gain more confidence in walking, but at times lose control of their weight and body boundaries, and plummet to the floor. They also become more aware of toileting needs and show straining and twisting rhythms in their bodies and in the way they use objects. This continues throughout the second year.

Once children have attained verticality and control over their weight, they can then proceed to master time. As they approach three years of age, they will explore suddenness and sustainment, moving with great urgency one moment, and dawdling interminably the next. They run, stop, snatch and grab, only to run on again. Their sense of time will, at first, be theirs alone, but as they gain more confidence, they accede to parents' demands for timeliness. They take more responsibility for themselves and can operate more effectively in the world. From time to time they exert themselves to an extreme for which their bodies are not prepared, and lose their body boundaries and become "fluid." Then they will tighten the periphery of their bodies and become solid again, moving on to other activities.

During the third and fourth years, most children experiment with all types of motor behavior, moving for the sake of moving, jumping and leaping, skipping, hopping and running only to stop and sway gently to soothing music. Sexual identity is being consolidated at this time, and children begin to look like little boys or girls and experiment with sexually appropriate behaviors. Direct imitation of family members reaches a high degree of refinement. Accident proneness may rise as movement impulses drive the child "out of bounds."

Through the ages of four to six, a high level of motor activity continues, but movement becomes refined, and may be subordinated to verbalization and skill building. Children shift between overwhelming movement activity and periods of relative stillness accompanied by a high degree of verbalization. They learn to plan actions in accordance with both their own interests and consideration for others. They can, by the age of six, differentiate between action thinking and word thinking, and can substitute one for the other.

At the time of entrance into school, the level of movement activity decreases and the appearance of stability increases. An observer can see a one unit trunk

that only infrequently twists at the waist and is isolated from the wrists. The child presents himself as a stable whole. Learning intellectual and social skills subordinates most movement behavior.

However, children at this age are naturally active, have reasonably proficient basic motor patterns and demand unrestrained movement involving the use of the entire body. School tasks must be alternated with movement experiences in order to give children opportunities to integrate new knowledge.

From seven until approximately ten or eleven, intellectual and social pursuits are paramount in children's lives. Movement patterns are stable and predictable. The body is often used as one piece, although a surprising degree of mobility and fluidity in movement is possible. Skills are practiced with great regularity until the desired degree of excellence is reached.

Between the ages of eight and eleven, sexual differentiation begins to take place. Young people, who have been so predictable, both in movement and social behavior, become enigmas. They often continue to behave as if they are children even though their bodies are telling them that they are becoming adolescents. Mood swings, inappropriate affective outbursts and disequilibrium may become apparent. Behavior similar to the four year old may be observed in young adolescents. They may become exhibitionistic, brag, clown, exaggerate, show off and generally lose their boundaries. Moods, accompanied by movement, change from wild aggression to anxiety, terror and excessive laughter, and a depressive preoccupation with injury and death. Ritualistic behavior may reappear, with the accompanying beliefs that such magic will keep the adolescent safe from the changes which are now playing havoc with body and mind. This behavior often continues through the ages of fifteen or sixteen, as sexual identity becomes diffuse and once again consolidates.

During this time the body boundaries expand and the body image grows out of proportion to actual physical changes. In the early phases of puberty, everything seems exaggerated—sensations soar, perceptions increase, impulses, ideas and emotions become extraordinarily intense. The adolescent again becomes accident prone. As adolescence progresses, and young adults become familiar with their new bodies, exaggeration diminishes, both in word and action. Modulation once again becomes possible, and behavior becomes predictable. This usually occurs by the age of seventeen or eighteen.

The person now is capable of taking responsibility and carrying on relationships with a high degree of predictability. Movement patterns stabilize and body image becomes solidified. Body boundaries are restored and more defined than ever before, and new values become integrated into the new self. The person is now ready to function in the world with the greatest degree of emotional and physical maturity that has yet emerged.

Knowing the progress of normal development can help us to work with children whose development has taken a turn from the usual path. This deviation does not mean that they are lost. It simply means that we must try a new path to find them. Communication through movement can be that path. If a child rocks to soothe him/herself, perhaps we can rock with him/her for a short while, showing that we understand what he/she feels. Then, we can slowly introduce new movement alternatives which might lead the child to standing up and using his/her weight, controlling self and the use of objects. Even if children are physically handicapped, autistic, blind, deaf, or retarded, they still move, and their movements can tell us where they can be reached. If we can use movement to communicate with them at their level, then perhaps we can lead them to new levels, where they can live as more self-aware and self-confident human beings.

Even if children are physically handicapped, autistic, blind, deaf, or retarded, they still move, and their movements can tell us where and how they can be reached.

COGNITIVE DEVELOPMENT AND MOVEMENT

LILLIAN THIERRY

LILLIAN THIERRY, a dance therapist and educator, has worked on developing movement education programs for the special child over the past five years. She has served as a movement therapist working with children of varying ages in a diversity of educational settings in the Philadelphia area and has been the leader of workshops, Title I and XX Training for Day Care providers, teachers and social workers. Ms. Thierry is currently a doctoral candidate at Temple University in Educational Psychology.

Early in the twentieth century, some educators were already using kinesthetic learning to improve reading, letter recognition and handwriting skills.

At present, many claims are being made suggesting that early motor learning is important to the development of the intellect.

A goal of the learning experience is the transfer of learned concepts to other similar or dissimilar situations—in taking an active part in the rearrangement of the basic forms a greater transfer of learning occurs.

At one time, physical function was almost completely divorced from mental function. At present many claims are being made suggesting that early motor learning is important to the development of the intellect. One can gain better knowledge of the cognitive processes through looking at motor development. Much of the research in the area of movement as it relates to cognition and perception has been carried on in the field of education. Maria Montessori worked with a multi-sensory approach to teach the retarded and immature in Rome around the turn of the century. Mable Fernald in the 1920's and 1930's used kinesthetic learning to improve reading, letter recognition and handwriting skills. (Crafty, 1969) In their research, movement was restricted to tasks involving tactile manipulative ability of the fingers and movement of the hands and arms. Another approach to the integration of movement and thought would be to concentrate on the child as a totality thereby concentrating on the integration of perceptual motor activities, with movement activities, with play activities, and with socialization activities within a classroom situation. This theory insists that the focus should be on the development of programs or activities using as many modalities as possible in an effort to foster a variety of different experiences of the same concept or perception. It is believed that movement, being the important expressive side of the human personality, has a great potential for use in educational programs for normal and atypical children. Movement activities can be incorporated effectively into educational programs in numerous ways. Activities involving movement of the limbs and total body movement could be combined in various ways in the performance of important educational skills. Intelligence is evidenced as the child uses eye-hand coordination and writes efficiently or inefficiently. If the children are able to control movement of their large postural muscles, they will usually attend the lessons on the desks in front of them with greater interest and alertness. The self-concept is enhanced as the child exhibits improved playground skills combining movement of the larger and smaller muscles.

Games have also been used to teach mathematic skills and it was found that game participation increased the motivational level of these children and had greater influence on learning than the traditional workbook methods. Movement activities provide a vehicle for the child to act out his/her thought processes. Movement experiences are obvious rather than subtle and represent the "here and now" rather than the "past and future." Movement activities provide a means for the children to participate in the decision making processes of their learning experiences. Bruner (1966) has speculated that no true learning can take place unless the learner is permitted to take some part in the making of decisions inherent in the learning environment. There appears to be greater flexibility of response evidenced in children who were encouraged to think about the variety of ways in which a task or group of tasks might have been executed.

A goal of the learning experience is the development of transfer of learned concepts to other similar or dissimilar situations. The aim is not only to teach concepts but to build links between tasks and ideas on the level that the child can see relationships. Movement can provide a forum for operational forms of teaching in several ways.

The emotionally-disturbed-learning-disabled child has compounded problems in that there is no clear definition as to what his or her emotional state is or how it got there. One can only speculate and try to remediate those processes that are by diagnosis missing. Therefore, many problems in the areas of anxiety,

impulse control and attention span complicate an already unclear situation. Controlling the level of arousal and activation seem critical to this child's learning process. "Hyperactive children are invariably beset with learning difficulties, while an index of intelligence and emotional stability is good self control." (Cratty, 1969)

The ability of a child to recognize a geometric pattern is a function of past experience, maturation, and the nature of the pattern. All of these factors influence the ability to differentiate between circles, half-circles, and triangles. The ability to differentiate between various spatial patterns and more complex perceptual-cognitive attributes such as spelling, recognition of letters and reading hinges upon the amount of transfer that does or does not occur among and between them. Research suggests that teaching pattern recognition will not be likely to enhance letter recognition or more difficult perceptual discriminations unless the transfer is specifically taught. For instance, a triangle, once identified, must be operationally changed into the letter "A". Half circles must be rearranged so that they form the letter "B" while cross "X" must be combined with a box and lines added and subtracted in formation of "M" or "N" (Cratty, 1969) Through movement, the child gets a chance to actively manipulate the basic forms. It is felt that in taking an active part in the rearrangement of the forms that a greater transfer of learning can occur.

Thus training in letter and number recognition should involve both training in the recognition of the patterns themselves and should help in establishing the correct up-down, and right-left orientation of the various letters and numbers. As this training is carried out a positive attitude toward the importance of this type of spatial orientation in letter and number shapes should be engendered. (Cratty, 1969)

Seriation or ordering is very important to performance of many school tasks. Many of life's tasks involve serial memory ability. One must be able to remember the correct order of spatial directions to get from one place to another. It is possible to combine serial memory tasks with tasks intended to remediate or develop other perceptual and motor attributes. Some movement experiences that contribute to learning by children having the handicaps mentioned above are as follows: 1) line walking which enhances dynamic balance; 2) jumping over lines or into various figures will improve agility and body-eye coordination; and 3) pattern recognition may be improved if the child is asked to name a configuration before manipulating it in some way.

Special children can be helped to improve intellectually through the use of various gross motor activities if they are encouraged to think about the activities in which they are engaging. It is important that those working with atypical children strive to elicit mediating responses—evidences of silent contemplation about the task. This can be accomplished by simply asking the child to modify the task. In the development of problem solving and creative thinking, the child or group of children can be encouraged to develop the activity itself.

Working within the context of a classroom setting in developing programs to educate emotionally-disturbed-learning-disabled children it is important that the therapeutic aspects of the overall situation not be overlooked. Since we are dealing with a multi-faceted problem (emotional disturbance coupled with learning disability) therapy must go hand-in-hand with the educational goals and objectives. Communication emerges as a mediating factor within the relationship. The child who is emotionally disturbed must have the opportunity to express inner conflicts. It is only through this expression that the teacher can get information that could aid in the relief of emotional conflicts thereby freeing the child to learn to better adapt to his environment. Melanie Klein, who was a founder of play therapy, found that at age two and three years psychological treatment was possible. (Wolf, 1969) Even though young children are not sophisticated verbally, they do play. One of her fundamental assumptions was that all play has symbolic significance. This is in line with the assumption that child participation and mutual cooperation between teacher and child will yield significant amounts of interaction material that can be used to help the emotionally disturbed child. Anna Freud sees the analyst's role not exclusively that of analyzing the child's productions or undoing his/her excessive repressions and other defense mechanisms. She also sees the relationship as an educative

Special children can be helped to improve intellectually through the use of various gross motor activities if they are encouraged to think about what they are doing.

Through dance or creative movement, the child can be encouraged to integrate cognitive and emotional experience.

Learning is facilitated through creative movement experiences as the shy child loses inhibitions and the aggressive one finds an outlet for pent-up or hostile feelings.

Movement is very much a part of the "language" of the child.

one, helping the child with an immature self-concept to accept the analyst (teacher) as a model for identification. (Wolf, 1969) Again, lines of communication emerge as a key tool within the relationship. Some freedom of movement allows the child to release in play feelings that had been repressed due to anxiety, allowing greater progress within the classroom and greater potential for learning.

With the information provided by research and conclusions which lead to the reunification of the human being as a totality, dance or creative movement comes to the fore as a way of fostering and remediating the total being. Dance or creative movement can be the modality through which the child can be encouraged to integrate cognitive and emotional experience. Movement provides that structure which allows for creative exploration in terms of thought and emotion. Through creative forms of movement, it is possible to expand both dynamic and spacial repertoires of children who have relatively fixed movement patterns. The process of positive interaction that is established between the teacher and the student can not only enhance the child's adaptive capacities, it can provide a situation in which shared expressiveness becomes meaningful. Where there is a limited sense of kinesphere or territorial space, the teacher can attempt to work toward expanding fixed movement repertoires and to develop a sense of self in active interaction with others and the environment.

As children develop, they soon find out that the body is a basic tool and they learn to use the body before clear abilities to verbalize and intellectualize thoughts and feelings emerge. Movement is very much a part of the language of the child. The use of creative movement is another way in which the child can get the opportunity to explore feelings, textures, shapes and sounds. Through the use of creative movement, this can be accomplished with the child either alone or in a group situation because each individual moves at his/her own pace and derives his/her own sense of satisfaction. There is no failure. A shy child can lose inhibitions and the aggressive child can find an outlet for pent-up or hostile feelings, which, hopefully, can facilitate learning.

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CREATIVE DANCE/MOVEMENT: IN SEARCH OF GOALS

JERYL QUINN

JERYL REEVE QUINN received an MA from New York University in Dance/Movement Therapy. She works with the severely and profoundly retarded as a consultant for Lackawanna Association for Retarded Citizens, and with pregnant and post partum women as a consultant for the Childbirth Education Association. She also has experience with various levels of retardation, learning disabled children, emotionally disturbed children and handicapped geriatrics. Earlier she taught 5th grade as a regular classroom teacher. She has been an instructor at the University of Scranton, a training consultant for Hazleton Nanticoke MI/MR and a dance/movement consultant for the Arts in Special Education Project of Pennsylvania.

Movement is basic to life; it is expressive as well as functional.

Self-awareness is a basic goal for many special children.

Creative dance/movement is based on the premise that movement is basic to life. In order to breathe, digest and maintain a heartbeat, parts of the body must move. Not only are movements functional in purpose, they are also expressive. Movements—whether they are gestures, postural shifts, locomotor movements, eye blinks, or breathing rhythms—are performed in a person's own style and reflect present state of being, past experiences, ability to perceive and organize, and emotional reaction to the situation at hand. Involvement in movement activities develops control of the body, a realistic understanding of what the body can and cannot do, an awareness of body parts and functions, and a sense of aliveness.

As a result of handicapping conditions, a person's ability to sense internal and external stimuli is disturbed and, therefore, one's self image is similarly disturbed. Movement experiences are basic and deal directly with the individual's body and the internal sensations of it. As awareness and control over the body develop, so does awareness and control over the self. Self-awareness is a basic goal for many special children. Achieving control over the body leads to pride and self-worth. Exploring the self through movement leads to greater self-confidence and self-knowledge. The process is a rather simple one and includes the following: children create movement; make choices; exercise their own wills and express their own preferences. They choose movements that express and reveal themselves, helping them to communicate with others and, when the expressions are accepted, each self is reaffirmed. Because there is no right or wrong response, personal movement style develops. Given the opportunity to challenge themselves, broaden their range, try new things and take risks leads to an increase in the number of options available to the special child, adding to the quality of his/her life.

Specific concepts can be reinforced through the use of movement activities in which these concepts are internalized and experienced with one's whole body; i.e., one explores many possible ways of shaping the body into a circle, of enacting the water cycle, or expressing feelings engendered by a circle or circular movement.

Involvement in movement feels good. The opportunity it provides to release energy is one which most children seek and enjoy. Creative dance/movement utilizes the healthy and productive aspects of each individual. These experiences, based on what the special child can do, encourage growth toward each student's potential by accentuating his/her positive attributes.

HANDICAPPING CONDITIONS AS THEY RELATE TO CREATIVE DANCE/MOVEMENT

Learning through movement involves the tactile, vestibular and internal muscle sensations which help the learning disabled child integrate knowledge which he/she cannot process visually or auditorily. Abilities to discriminate, remember patterns, coordinate perceptual systems, perform gross and fine motor actions and integrate verbal and non-verbal self-expressions can be reinforced through bodily felt experiences.

The socially and emotionally disturbed child, through creative movement and dance experiences, can reshape his/her confusions, misperceptions, lack of trust, and reality awareness in an atmosphere of play, exploration and safety. Improvements in emotional and social behavior within the physical self and the self in relation to others can be experienced, practiced and eventually learned.

through movement activities.

Students at various levels of retardation will benefit from developing their abilities to communicate and interact socially as well as in learning and remembering specific concepts. The mildly and moderately retarded individual is often aware of his/her incapacibilities. Feelings of inferiority often lead to hesitancy at trying new things; this impedes the normalization process. Rigidity and inappropriate self-expression can lead to further alienation from others. Creative dance/movement, for some retarded students, is a less threatening modality than speech and therefore can be used successfully to encourage the development of appropriate self-expression, risk taking, spontaneity, self-confidence and self-knowledge. Movement activities help students learn what actions and movement qualities they have at their command and to expand their movement repertoire. Using developmentally organized criteria for the structuring of activities, the teacher can help children achieve their greatest potential. Severely and profoundly retarded children can also be aided in this way. Although these children have fewer abilities and their achievements will be in smaller increments, their need to communicate is just as great. These students, especially, can benefit from creative dance/movement experience because they may not be able to use other means of interacting successfully. They also may be lacking adequate kinesthetic awareness, the internal sense of perceiving movement, position and tension in their body parts. Experiences geared toward basic interaction, self-discovery, kinesthetic stimulation, self-initiation and developmental progress are beneficial for the retarded child.

The physically handicapped students will operate within their range of physical ability and may be able to expand their boundaries with the increased motivation of a creative movement program. These children have a particular need to explore the range of movement they do have and to use their bodies expressively and creatively.

All children will be able to use their bodies with increased skill and, therefore, experience pride, heightened positive self-image and increased self-motivation as a result of creative dance/movement experiences. In groups, these activities facilitate the learning of appropriate socialization skills which are often lacking in handicapped youngsters. Creative dance/movement allows each individual to perform at his/her own capacity regardless of the mental, emotional and/or physical limitations of his/her condition. This modality addresses the child rather than the handicap and attempts to work with the skills the child already possesses. It focuses on growth of the healthy aspects of the individual rather than on treatment of the handicap(s).

STRUCTURING CREATIVE DANCE/MOVEMENT

Experiences in creative dance/movement can be structured in various ways depending on the abilities of the students and the goals chosen by the teacher. Some students, such as those who are severely emotionally disturbed, cannot tolerate group involvement and may require individual instruction. The same is true of severely/profoundly mentally retarded children who derive limited benefits from group activities. However, with other students, group activities may be used effectively to develop socialization skills and/or to expedite classroom organization.

Some teachers prefer the "movement break" concept where a few minutes several times during the course of the day are set aside for short activities. Other teachers prefer to schedule longer time periods on a weekly basis. The timing and duration of creative dance/movement activities should be geared to the attention span of the pupils.

The amount and the shape of space available and the physical surroundings will determine which creative dance/movement experiences can be used and will have an effect on the students' creative output. A room large enough for movement but not so large as to be overwhelming to the child is optimal. Many activities can be done in classrooms. Desks, chairs and tables can be used creatively to shape an environment that invites exploration. Stationary movement experiences of the upper body or lower body can be used when space does not permit locomotor movement. Small cramped spaces will elicit different kinds of movement than large open spaces (such as a gym or the

In creative movement we focus on the growth of the healthy aspects of the individual rather than on the treatment of the handicap.

The timing and duration of creative activities should be geared to the attention span of pupils.

Many movement activities can be done in limited space.

outdoors).

Children who are highly disorganized find it difficult to focus in a room which is too large. Other children may feel trapped when there isn't enough room for them to have adequate personal space. In either of these cases, behavior problems are likely to occur. These behavior problems can be avoided by selecting a space in which the children will feel comfortable doing the chosen dance/movement activities.

Children who function at a low level in creative activities need to have their activities somewhat structured so that they are given clear choices. Games can be employed where the child must make a decision between two or more alternatives. A child operating at a higher level of creativeness can choose more easily from an expanded range of alternatives or can create alternatives. It is important in creative dance/movement that choices and self-expressions are not considered right or wrong and that activities are not structured to have correct and incorrect responses. Games involving competition, winners and losers, the process of elimination, etc., are not geared toward the goals of a creative dance/movement program.

Selection of activities according to the needs and characteristics of the students, time and space available, and enjoyment produces boundaries within which freedom to create can be experienced. Such action on the part of the teacher allows an infinite range of choices to be honed into an achievable and appropriate curriculum in dance/movement for children with special needs.

BEHAVIOR MANAGEMENT

Negative behaviors may range from wandering attention to purposeful acts of disobedience and aggression. The purpose of these movement activities is to help each student grow as a person so that he/she can overcome the causes of his/her inappropriate behavior. Accordingly, the teacher needs to look beyond the immediate problem behavior and to its cause. Very often, a special child lacks security and needs reassurance. To harshly rebuke the child will make the cause of his/her attention-getting behavior, lack of security, worse. A better solution is to reassure that child with a hand on the shoulder or by holding him/her. At the same time, the teacher can continue to give visual, vocal and body focus attention to other group members who are participating appropriately.

It is important to give more positive attention to good behavior than negative attention to problem behavior in the classroom. Many children seek any kind of attention and will work hard to receive negative attention if that is all that is available.

There are many ways that the teacher can provide structure to avoid behavior problems. With observation and sensitivity on the part of the teacher, an energy releasing activity can be introduced when the students seem to need it. This can prevent many behavior problems.

Props can be used to keep participants involved. Ropes, hoops, and tire tubes, for example, provide physical bonds between group members that help each one maintain his/her focus. The more disorganized the child, the more organization will be needed in the activity. Having a definite and recognizable beginning and ending helps the child know what is going on and provides structure. The use of rhythm adds a calming and organizing dimension to a group activity. Limiting the choices for a creative activity to only a few alternatives can reduce a child's frustration. In creative dance/movement inappropriate behaviors can be channeled into appropriate behaviors. This is possible because every action is a contribution and can be used as such. The movement quality of inappropriate behaviors can be enlarged upon or otherwise developed into the same movement quality used in an appropriate behavior. For instance, an explosive burst of energy used by a retarded child to initiate rocking can gradually be shifted to another movement that also incorporates an explosive burst of energy, such as an imitation of popcorn popping.

In creative activities it is important to accept all contributions regardless of whether or not the student's personal style or choice is similar to the teacher's. It is very easy to give non-verbal messages to students about whether they have met

Movement activities should not be structured around correct or incorrect responses.

Give more positive attention to good behavior than negative attention to problem behavior.

In creative activities it is important to accept all contributions.

the teacher's expectations and pleased him/her by adapting to his/her personal style. Messages that reject the child's contribution or style discourage self discovery and discriminate against the pupil who cannot adapt himself/herself to the teacher's style. Competition and frustration can result from this course of action. Care should be taken to choose means that validate the child's person and value many of his/her qualities while disapproving or ignoring specific behaviors. Contingency contracts are recommended as a way of letting a child know exactly what behavior is considered inappropriate and at the same time giving credit according to the terms of the contract. Contingency contracts work surprisingly well with even low level children who are non-verbal and do not fully understand the contract's meaning. They seem to pick up that the teacher is valuing them and their contributions, and this, alone, often brings about improved behavior.

CREATIVE DANCE/MOVEMENT COMPARED TO PHYSICAL EDUCATION

The typical physical education program and the creative dance/movement program have many similarities and some very important differences. The similarities are that both have as goals control over one's body and the resulting feeling of pride for having achieved self-control. Both programs are concerned with gross and fine motor coordination, balance, speed, agility, strength, endurance, laterality and directionality. Both try to provide activities which release energy and are fun. Creative dance/movement and physical education programs choose activities for special students guided by developmental criteria. Both are interested in developing neuromuscular patterns within the child's body according to that child's maturational level. Both use props and equipment such as balls, ropes, music, hoops, etc. Both may try to convey concepts of teamwork, interpersonal organization and socialization. Teachers of both programs need to provide structure in order for lessons to be positive experiences.

Usually, physical education teachers provide instructions which show and tell pupils exactly which movements they are to perform in order to learn how to achieve a particular skill. Whether the skill be clapping hands together for a low level child or performing an intricate gymnastic stunt, the physical education teacher has in mind the exact movement expected of the pupil. Whether or not that specific movement approximates what the teacher has in mind determines if the child has done well or not done well. In physical education, children compete in order to demonstrate the movement skills they have learned, exactly as they were taught.

On the other hand, the creative dance/movement program is concerned with what a child can create. What that child creates may be totally foreign to the teacher. The teacher's role is not to give exact instructions but to provide a framework within which the child's choice can be elicited and enacted. The teacher facilitates the child's use of self-motivation, self-exploration and self-discovery. This contributes greatly to the process of becoming a unique individual who possesses and controls his/her own body and his/her own personal movement style. The factors of gross and fine motor coordination, balance, endurance, speed, agility, strength, laterality and directionality are not ends in themselves, but means through which individuals discover themselves in relation to other people and the environment. The development of one's personal movement style is a goal in creative dance/movement. Does the child accent movement segments with a burst of energy? Does this burst come at the beginning and ending or are the segments vague and left unfinished? Is the movement long, drawn out, sustained or sudden? Does it seem focused? Is the focus on only one stimulus at a time? Is everything done with brute strength or is a delicate touch possible? Is there a sense of ease and flowing energy? Are all these qualities in the repertoire or is the range limited? Helping a child to discover and broaden his/her personal style does not involve "rights" or "wrong" and is not competitive.

Creative dance/movement is concerned with expressive movement more than with functional movement as in typical physical education programs. People use movement expressively in all their interactions. Gestures, the way we lean toward or away from another during a conversation, the way we walk and

Developing a personal movement style and increasing aesthetic awareness and appreciation are goals of a creative dance/movement program.

perform daily acts, are expressive of ourselves and communicate aspects of our individuality. Special students, in particular, may not be able to accomplish many functional movements and may be helped by this opportunity to concentrate on expressive movement. Expressive movement is helpful with communication—an area of frustration for many special students.

Finally, the creative dance/movement program is different from the typical physical education program due to its roots in the art form of dance. One of the goals of the creative dance/movement program is for each special child involved to increase his/her aesthetic awareness and appreciation. Beauty is an essential part of each person's existence and the aesthetic qualities inherent in dance add to the quality of life of each individual who participates or observes. Whether the whole body dances or only a part of it, the holistic involvement in art creates a personal experience of beauty and pleasure.

Whether the whole body dances or only a part of it, the holistic involvement in art creates a personal experience of beauty and pleasure.

MOVEMENT: SOME IDEAS FOR GETTING STARTED

SHEILA BRIDGES

SHEILA BRIDGES was trained in Britain as a specialist in Dance Therapy, Relaxation, Preparation for Natural Childbirth, Creative Modern Dance, Music Education, Speech and Drama, and Creative Writing. Since 1952 she has been teaching the various facets of the above in mental health facilities, public health programs, as assistant to doctors in their private practice, in public and private schools, universities and private classes in Britain, France, Switzerland, West Indies, Chile, Colombia, and the USA. She has also served as an interpreter of English, French, Spanish, and German.

One does not need to be an accomplished artist to provide meaningful arts experiences for children. . .being flexible, attentive and enthusiastic are more important qualities.

Make the lesson fun. . .students will give of their best and achieve more in classes that they enjoy.

Movement activities can be structured to stimulate high energy or relaxation, depending on the needs of the students in a particular situation.

Simple chords, rhythms, songs, chants or rhymes can set the pace and provide structure for a movement activity.

Having talked with numerous excellent special education teachers who are hesitant about introducing the arts into their curriculum, it should be stated unequivocally that you do not need to be a combination of a Michelangelo, a Beethoven, a Pavlova and a Shakespeare. By starting with simple activities, teachers who are inexperienced in the arts can develop both confidence and competencies. The intent of this paper is to provide some ideas for initiating movement experiences.

As in other learning situations, teachers must be flexible and attentive to individual and group needs and capabilities when involving students in a movement session. The attention span of some handicapped students tends to be very short so a dynamic, positive approach is essential to engage and maintain the interest. Sometimes the pupils need large, expansive, energetic activities and a few minutes later may need to be calmed into gentle tranquility—a state of open, relaxed awareness completely different from and never to be confused with more passive apathy. The development of a "sixth sense" on the part of the teacher that acts like a sensitive antennae in noting the psycho-physical response of each individual and the group as a whole is probably gradual and automatic in anyone who selflessly and sincerely works to stimulate greater harmony in mind and body in those with whom they come in contact. Teachers are in agreement that students will give of their best and achieve more in classes that they enjoy. Classes are enjoyable when the presentation is interesting, the work demanding but within the limits of the students' present possibilities and the students are encouraged, helped and stimulated to widen their range, knowledge and experience via learning and experimentation. It is amazing how much the teacher also widens his/her own range and experience by detailed preparation of the work to be presented and by experimenting alone or with the class.

A good start with your group is usually with a bright very rhythmic record (like a folk dance). Sit on the floor and tell your class to copy your simple arm and hand movements. If you feel very much at ease doing this you can then do a little with the group standing. This is an excellent way of tuning in to the class and gives an opportunity to sense how the different individual members are feeling—who is looking forward to the session; who is withdrawn; who is "hyper." You can observe the degree of eye contact, muscular control, co-ordination, balance and awareness of rhythm. You have an opportunity to see if there is a particularly dominant member of the class whose desire for attention, handled positively and tactfully, can be turned into an asset.

Either finish the warm-up session with slow movements sitting or lower the volume of the music so that everyone has to concentrate to hear it. This will usually be adequate to keep the energies under control. If there are signs of the class going to pieces and getting too wild either now or at any point, instead of trying to shout louder than the loudest voice to get attention, strike a chord on the piano and then speak very quietly.

If you haven't the faintest idea how to play an instrument and are terrified at the prospect, find a piano in an empty room and you'll see that really it is not a frightening animal at all. In fact it's quite tameable. To form simple chords on a piano play any white note with your right thumb, skip one key and play the next one with your middle finger. (At first your little finger may not strike the note very firmly but like your students it is amazing how much stronger and more accurate it will get with a little bit of patient practice.)

This is what you are doing. . .



Now try playing all three keys simultaneously. . . surprise, surprise, you have a triad (that means a chord of three notes).

Any triad sounds consonant, try several. You may like the sound of some better than others. Try to play the same triad with the left hand. . .



Then try it at a lower octave, i.e. where the white keys you strike are in the same relative position to the black keys. If you play the same triad with the left hand and with the right in two different octaves simultaneously, it already sounds quite classy—especially if you experiment playing them in rhythm as though you were saying “sit down!” (short-long), or “walk slowly” (long-long-long), or “gallop and gallop and gallop” (long-short-short, long-short-short), etc.

If you’ve tried experimenting on the piano as I suggest, the following is a game that most groups love to play. “I wonder who can tell whether the piano is telling you to stand up quickly or slowly?” If you want them to stand up quickly strike a triad near the right hand end of the piano keyboard twice firmly, quickly and loudly in the rhythm you would use if you said “stand up!” (ta-ra). “Now let’s see how the piano is telling you to sit down.” If you want them to sit down slowly walk your fingers slowly and quietly down the keyboard from right to left one note at a time, missing two or three keys between each key you strike—rather like a spider crawling.



If you like you can “walk” down the piano from right to left (using right hand) little finger, then thumb; (left hand) thumb, then little finger; cross the right hand over and play little finger then the thumb; go on down left hand thumb, then little finger, etc. The reverse for standing up slowly. Experiment when you are on your own with a piano and you’ll be amazed how easy it is. Try to play softly and evenly, and strongly and evenly. It is a game that children of all ages and almost all conditions seem to love to play. You can bring it in more than once each lesson but like all good games don’t go on too long so that fun turns to boredom.

Most schools have one or two pianos and apart from introducing aural variety into the lesson it is a start at inculcating an awareness of pitch which will lead into the beginnings of appreciation of melodic line.

If you are afraid of your students getting a bit wild, for the first few sessions keep them sitting most of the time and moving mainly their arms and hands and occasionally the upper part of the body as a whole, or stretching out the legs and moving the feet.

You can make up a simple little jingle:

(Speak loudly)	“I am going to stretch up tall,
(Softly)	I am going to curl up small,
(Loudly)	I am going to stretch up tall,
(Softly)	I am going to curl up small,
(Loudly)	I am going to stretch up tall,
(Softly)	I am going to curl up small,
(Loudly and gradually more slowly) Now I’ll open my arms wide.”	

You can do it sitting on a chair. You don’t need any long explanations. Say the words out loud and you’ll find yourself automatically stretching. “Yes, go on, not a half hearted poke upwards but a really good stretch, as though you were aiming at touching the ceiling. . . that’s better, with both your arms. . . see how tall you can make yourself. . . good! When you curl up tuck your head right down as though you didn’t want to be seen. Try staying curled up for a minute or two and it should feel so good to sit up afterwards. Take a deep breath as you do so.” Try saying the words rhythmically, not in a singsong manner but almost dramatically. You might be self-conscious doing this in front of the visiting dance

Children physically respond to various expressive aspects of accompanying music—a good source of motivation and subtle control.

therapy consultant but you certainly don't in front of your own bunch of kids. There you are helping them to limber up their spines, improve their circulation, stretch their muscles and help even the most handicapped ones to have the fun of starting to act and dance. By the way, do wear something in which you can move easily and that won't make you too warm. Remember that it sometimes takes effort to get your students to do anything so you will have to put tremendous energy into whatever movements you are doing to evoke the response you seek. Really exaggerate your movements and your enthusiasm. A short period full of vitality and energy is both more valuable than a longer, less dynamic session and easier for you as the students will be more manageable because you hold their interest.

To beat a drum seems to appeal to a basic instinct in most people and it is interesting to see how many of the children in special classes have a true sense of rhythm and to notice how it can be developed in the others. You can play a simple step pattern with one finger on the piano repeating each note, giving a greater accent to the first note of each pair. . .



or play this same pattern on a drum. Get the children to listen first ("sit on those hands" or fold your arms so that those hands don't get naughty and try to start clapping before I tell them to"), then get them to join in quietly clapping with you. Let one or two children tap drums while you play, or use a simple regular march time record. I find that it is a good idea to not use more than two, or at the most, three drums at a time. (Keep it as a special treat for rare occasions for everyone to have an instrument at the same time.) As you get to know your children from the rhythmic angle you can even let the ones with the really well developed sense of rhythm carry on the beat to leave you free to move your hands and body. Those who are not so accurate can be helped and encouraged by playing more quietly along with a record that has a strongly marked beat.

When you were small you probably played "Grandmother's Footsteps," and a game called "Statues." Several games that most children love have grown out of these. The class has to walk or skip quickly or slowly depending on the type of music that is playing (or the record or the drum rhythm) and has to freeze when the music stops. Try to make the stops coincide with the musical phrases. Don't attempt to do anything more than this for the first few sessions. Very, very occasionally you can play it like an elimination game, i.e. anyone who moves after the music stops is out. However this variation should be used very sparingly as the children who most need the practice will be the first to be eliminated; also they will soon get bored and become unruly.

Next you can suggest that when the music stops the children should try to look like a familiar object, e.g. a tree, or a wide bridge over the . . . (naming your local river). Children with little self confidence, psychological insecurity, general apathy etc. will rarely, of their own accord, make strong open gestures; but, strong, wide movements can, by working from outside-inwards help to promote inner strength and security. Also, children with physical limitations can be helped immensely. Jimmy may never use the left side of his body but if you point out that the cars will fall into the river if they try to go over a lopsided bridge, you and Jimmy will both be amazed how much domination of will he will bring to his "useless" arm and how much movement can gradually be brought into it. You can either continue to stop like bridges until everyone gets a position that looks like a wide steady structure or you can change each time; "be" . . . a tall house, a horse, a long thin stick, a round ball, a clown, etc. Choose your objects carefully bearing in mind the possibilities and pitfalls each may present, and on what movements you are trying to work. For example, after being a bridge you could pretend it was a hot day and you wanted to cool your hands in the water. As you take your hands out of the river shake the water off them one at a time and both together. Many brain damaged children seem to suffer from poor circulation so this type of movement can be very beneficial. They may well have poor balance too so you can always hold onto a desk or bookcase with one hand while you shake the other. Certainly when you pretend to dip your feet in the water hold

Creative movement activities can sometimes be incorporated in familiar games or stories or in those you or the students devise.

Imagery—"being" a statue, a tree, a ball, a giant or a clown—stimulates expressive movements.

onto something steady as you shake first one foot then the other. It is a good idea to stand in front of your class and always get them to copy what you do as though watching in a mirror, thus when shaking feet you will make sure that they do in fact shake each foot in turn and do not stand on the stronger foot and shake the weaker one each time.

If you have been pretending to be a tree when the music stops you can imagine it is Spring and your arms and hands can be tight buds gradually opening into leaves that grow and sway in the wind. Or you can pretend it is Fall and the wind is blowing hard, the tree swaying around and the leaves falling off and twirling to the ground. If you are afraid that twirling children may become unruly, don't introduce this idea until you have had several sessions. At first have the leaves falling gently down and landing at the foot of the tree. The next step would be to have a gentle little breeze that would just waft them along. Remember that, if it is a gentle little breeze, you would be talking very softly—an unusually big gust may cause you to raise your voice, but return to a gentle low tone afterward. Pace of voice as well as volume stimulates or calms a group and you would talk in a slow, heavy voice as you pretend to drag or carry a heavy bag of leaves to the roadside.

"Props" can be very useful to increase variety of movement. Most students enjoy dressing up (even those who won't admit it) and those who lack self confidence, feel they can't act, or "don't want to make a fool of themselves" are emboldened by a prop that partially or entirely masks their identity. Before using any props with your classes it is a good idea to put them on at home, in private, in front of a large mirror and see how you yourself react. First, does it make you "feel" any different? Some props make you feel light and dainty, others make you feel sinister, others make you feel big and strong, others that you are completely incognito. Secondly, watch your movements. Almost inevitably your prop will make you move differently. "Big feet" (a prop which can be made from cardboard, cloth and elastic) or weird shoes will cause you to lift your feet in an unusual way and to use your body differently to counteract the different foot movement and to steady your balance. Cloaks will make you move in a more dignified way and you'll probably find yourself making large sweeping gestures to make the cloaks float out and make patterns in the air; such cloaks are made of taffeta that rustles and whispers as it moves and offers some resistance to the air. These are particularly useful in working with blind students. Cylinders that cover head or arms will make you move jerkily like a robot. A gauze scarf that floats curving through the air seems to transmit its delicacy and smoothness to even the most heavy, uncoordinated body. All students seem to be fascinated by tubes of stretch fabric that, although apparently completely untransparent in actual fact, do permit the person inside to see through. Put one of these on in front of a mirror and you will see that you have become a fascinating form—you are no longer an ordinary human. You are a delightful something that can be long and thin like a string of spaghetti, or almost as square and flat as a wall; you can poke out in odd, unexpected points, wriggle like a sinuous snake or shake from top to bottom like jelly. One of the most attractive things about these tubes is the pattern and design formed when several are juxtaposed either still or moving. Big lengths, squares or circles of material that are held at the edges by two or several students also create forms and designs that are fascinating. Elastic in differing tensions and lengths with loops at the ends for hands and/or feet offers resistance and suggests a completely different gamut of line and movement.

When you are making your props use a variety of colors. You'll find that a negative child will be thrilled when you say, "But you must try it, Karen. I brought this especially for you. You see how perfectly it matches your shirt (socks . . . pants . . . whatever. . .)." Also, of course, children often love to be able to choose which color they are to have.

Experiment with different textures too. Some fabrics are stiff, some drape beautifully, others rustle or whisper as they move. Go through the remnant pile at your local fabric outlet or buy old curtains, bedspreads, etc. at a garage sale.

Remember all the time that you are using these, your tools, to help your students holistically. At the same time that you are increasing their sense of beauty and awareness of color and form you are developing their sense of touch, their sense of rhythm and bodily awareness; i.e., the shy little boy who

Carefully chosen "props" can provide added dimensions of security, concreteness and beauty.

Do keep in mind that the remedial and the aesthetic should go hand in hand.

walks regally around in his cloak is not only learning to be a good actor, he is also developing his self-confidence, his independence; he no longer merely learns by rote and copies and hides behind his peers; at the same time he is doing a lot to overcome physical defects—the round shouldered slump. . .the dragging foot. . .the limp arm. It is fun to pretend you are ducks wading through long grass but as you do this (especially when wearing oversized "big feet") you are improving your sense of rhythm and balance. Many small muscles in the feet work to grip the floor. Lifting the knee high "to get above the wet grass" makes those lazy thigh muscles work quite hard. Your little songs and rhymes can all help your students to become more articulate. Keep in mind that the remedial and aesthetic should go hand in hand, and make sure it is fun. If the teacher enjoys it, the odds are that the students will benefit psychologically and physically, and enjoy it too.

CREATIVE DANCE/MOVEMENT IN SPECIAL EDUCATION: A CASE IN POINT

ELISE BILLOCK TROPEA

ELISE BILLOCK TROPEA, a Registered Dance Therapist, is a Senior Clinical Instructor in the Master of Creative Arts in Therapy Program, Hahnemann Medical College, Philadelphia. In 1979-80, she was the Assistant Director of the Arts in Special Education Project of Pennsylvania. Formerly, she worked with autistic children for several years in a day treatment center and now maintains a private practice in dance therapy. She also provides consultant services to the Philadelphia Title XX Family Day Care Centers and to the Philadelphia Intermediate Unit ESEA Title IV-C arts in special education project. Ms. Tropea is a member of the Board of Directors, the American Dance Therapy Association.

Jason spent much of his school day lost in fantasies or fighting.

In a creative movement warmup session, Jason's shrug of the shoulders became his special gesture.

Concepts, such as high/low, fast/slow, were reinforced and became more concrete through moving with stretch jersey.

Jason appeared to be surprised when he discovered he could move slowly and methodically.

The consultant capitalized on Jason's potentially raucous suggestion, structuring it into a positive activity.

Jason is a nine year old boy. Of average height and weight for his age, he is an appealing looking child. Although he tests out as having at least average intelligence, he is inconsistent in his classwork and spends much of his school day lost in his own fantasies. Recesses on the playground often end in fights as Jason finds himself a stranger among other children his own age. He is withdrawn and reticent to share his feelings and thoughts with his teacher as well as his classmates. He is not alone, however; his classmates share his difficulties in making and maintaining relationships with peers and adults, and in focusing and sustaining attention for learning in class. Jason attends a special class for socially and emotionally disturbed children.

Last fall, Jason and his class participated in a series of creative movement sessions designed primarily as demonstrations for the classroom teacher as part of an in-service program. Through such demonstrations, the dance/movement consultant hoped to relay several underlying messages, both to the students and to their teacher: 1) creative dance/movement uses, as its starting point, the child's own state of mind, level of energy and immediate ideas and concerns; 2) each participant adds his/her own unique and special contributions to a movement experience; 3) neither student nor teacher need be "well coordinated and graceful" to derive success and satisfaction.

Each session began with a series of warmup activities, usually done with the group arranged on chairs in a circle. The name/gesture game provided introductions in a relatively nonthreatening way. Each child took a turn saying his/her name and accompanying it with a special gesture. A simple movement such as Jason's shrug of the shoulders became his statement to which the entire group responded by repeating both his name and his gesture. The group explored variations such as repeating the activity to a specific rhythm, and trying the entire sequence in slow motion. And so it went, until each participant had "tried on" his or her own name gesture and those of the other group members. Warmups such as this one help to focus and organize the group, and set the stage for more gross motor activities to follow.

Once the group had established some synchrony in working together, it was then able to move on to activities requiring more expansive use of the space around it. The chairs were pushed aside, the circle made larger, and Jason's class now stood to take part in exploring the large stretch jersey. To music, concepts of high/low, wide/narrow, fast/slow, jerky/smooth, and strong/light were incorporated into a "follow-the-leader" movement activity. Jason mused as he watched and felt the effects of his leadership upon the rest of the group. At first he delighted in tugging with all of his strength; he agreed with the consultant that it felt great to catch the group "off balance." When encouraged now to lead the group in moving smoothly together, he appeared surprised at his ability to move slowly and methodically as he swayed from side to side.

Each member was encouraged to find a new way of moving, utilizing the movement "vocabulary" presented in the stretch jersey warmup. Within the context of the movement, most of the children were able to talk about the influence they had upon the group, and how it made them feel.

When Jason suggested "tying up" the group with the jersey, the consultant structured and channeled the potentially raucous idea into a body sculpture game. The jersey now put aside, the children took turns being the "sculptor," using the participants as if they were clay, connecting one person to another. They explored variations such as setting their sculpture in motion, sometimes

using music, at other times moving in silence. Again, as in the warmup activities, opportunities to lead and to follow, to take an active role and then a passive role were met with concentration and creativity. The consultant at times made suggestions and helped to structure the ideas generated by the students themselves. Her role for the most part was one of facilitator.

Each of the demonstration classes had a ritualized ending. It was important for Jason and his classmates to have a clear sense of closure to the creative movement activities that had taken place. A simple relaxation exercise, with the class lying on the floor or sitting in chairs, served often to mark the end of this time and to help them achieve a state of quiet alertness.

In these four sessions, Jason experienced himself as a vital member of a group and he was able to "try on" new roles that were not a part of his usual repertoire. These experiences also provided the group with a different perception of Jason.

Through creative movement, Jason experienced himself as a vital member of the group.

DRAMA

DRAMA/EXPRESSIVE PLAY IN THE SPECIAL EDUCATION CLASSROOM

by Edward Lilley

...substantiates the value of and necessity for imaginative play as part of the learning process, especially for handicapped students; includes many examples of learning experiences derived from creative drama.

DRAMATICS: CENTER STAGE IN THE EDUCATION OF THE DEAF

by Richard Nowell

...discloses the motivational, educational and evaluative characteristics of drama in the learning process of deaf students.

THEATRE MOVEMENT FOR THE BLIND AND VISUALLY IMPAIRED: TWO SUMMER SESSIONS

by Forest Feighner

...provides an account of an experimental project in which blind and visually impaired students gained therapeutic and artistic rewards.

MIME IN EDUCATION: A DEVELOPMENTAL PROCESS

by Lola Kearns

In association with David & Carol Geyer, Imagimime

...gives many techniques for providing opportunities for students to participate in creative, expressive mime experiences.

DRAMA/EXPRESSIVE PLAY IN THE SPECIAL EDUCATION CLASSROOM

EDWARD LILLEY

EDWARD LILLEY is an Expressive Arts Consultant specializing in expressive play and creative drama for handicapped students. In this capacity he serves numerous educational agencies throughout the country providing in-service workshops for teachers of the handicapped and demonstration lessons with a variety of exceptional students. Mr. Lilley's work has recently been documented in the film, A Touch of Hands, produced by The University of Pittsburgh.

Early play can equip us to handle difficult real-life situations with flexibility and resourcefulness.

Play is child's work.

It is the "will" or intent to play that guides a child through exploring the myriad ways to use the voice, hands, face and body.

Play is for some children a healer, an expander.

To create or participate in drama, one must be able to pretend. The ability to pretend requires that one be able to adjust one's point of view. Even in early games, we are asked to give a chair or a tree a special significance (i.e., in the game Tag, some object or spot is "safe" and while touching this spot, we are protected from being caught by the person who is "it"). These early play experiences introduce us to the many skills we shall need later to play out the role of the troll or a giant. In a more practical way, early play can equip us to handle difficult real-life situations with flexibility and resourcefulness. So play and drama are inseparable. Drama grows out of early play. It is no irony that actors are called players or that the story they act is called the play. Even the audience of a play must be willing to enter a "special state of mind" to let the illusions of the theatre work. This might well be called pretend or play.

Work and play are often viewed as polar opposites. This gives work the aura of being the more admirable or worthwhile activity of the two. Yet, while at play, we all gained the huge storehouse of sensory information which led to the largest intellectual leap we shall make in the lifetime—speech. Play is child's work. One need only to watch the determination, the concentration, the endurance of a child who is hard at play to see that this is no idle or frivolous activity. Play is the medium through which we discover our world. In the first years of our lives, our brains are bombarded with multi-sensory information. The world is the great unknown. We come to know it through exploring or playing. This broad spectrum of sensory information that we seek out is the basis for all further learning. In the first stages we are "receivers," curious, hungry, driven to find out more. We soon discover that a part of that world includes people and that these "others" respond to certain things we do (i.e., I make this face and my caregivers smile. I make this sound and someone always comes running to my bed. I do this with my body and they frown.). All of this is exploring or playing with the possibilities that exist in this new world. It is this "will" or intent to play that guides a child through exploring the myriad ways to use the voice, hands, face and body. Soon the child leaves the arms of the caregiver to explore the larger world and all its dangers and delights. This larger world includes other children. To deal with them, a child must quickly learn new skills. All of these shall be learned through play. We all learned to wait, to control, to share, to be fair, to trust and to have faith at this exciting stage. . . all through play.

By the time we are three or four years old, the world has pretty much decided who we are and how we act and what to expect of us. Johnny, everyone agrees, is quiet, passive, shy and compliant. Sally is aggressive, manipulating, loud and hyper-active. Jack is uncontrollable, primitive and regressed. How shall these children try out new behaviors? How shall they discover the other possibilities of how to respond to the world? How shall they discover that there is so much more to all of us than we can now imagine? It might just happen within the context of a good play experience.

Play is for some children a healer, an expander. They somehow instinctively know that here they can "play out" their concerns, their fears, the things which overwhelm them. Here they may gain some understanding of the things which mystify them. They can reverse the roles, can be in control, can have some say in how things turn out. Stories, games, songs or "let's pretend" sessions all can allow children a safe place to approach, reach out and explore the unknowns in their lives.

Johnny, described above, may be lucky enough to be given a dragon

puppet. Dragons typically are fierce, loud, unreasonable (very different from Johnny). Upon placing his hand inside the puppet, Johnny understands that, as this dragon, he can use his voice in a way no one would have expected; he can behave in a loud and aggressive way that he might not ever have had the nerve or inspiration to try before. The play does not transform the child permanently, but has allowed him the luxury of a safe way to experience new ways to respond and behave.

Sally might be chosen to be "the mouse" in a game at school that requires her to hide from "the cat" and remain absolutely still. With the "life or death" motivation most children invest in play, chances are, Sally will struggle to control her impulses to move and shall, in a surprising way, succeed. She leaves the game knowing more about her body and how it is controlled.

Today a lady came to play with Jack and brought a set of rubber farm animals. Jack immediately put one in his mouth and got great satisfaction out of throwing the others against the wall. Jack's grown-up friend spoke in a soft, soothing voice and retrieved the animals, standing them all in a row. Then, one by one, she laid the animals down whispering, "Shhh! Go to sleep." As she did this, she petted each animal. . .all but the last one—the tiny lamb. She left the lamb standing. Jack felt a tension. She hadn't finished. She had forgotten it perhaps. Without thinking, he completed the series, laying down the lamb and petting it once as gently as he knew how. Next, his friend covered each animal with a soft blanket, humming sweetly as she did. . .all but the lamb. She forgot the lamb. Again, Jack felt uneasy, something was wrong. She must not forget. The lamb would get cold. Quickly he pulled the blanket over the lamb and petted it, adding a humming song of his own. Before the play was over, Jack, imitating his friend's actions, helped the animals "Walk, Walk, Walk," and fed them paper "food" from a pie tin. He had a good feeling inside having cooperated. He felt protective of his new toys. He had discovered some new things to do with them.

All children grow through play. Some children move along in their play development with little need of intervention from adults. Some appear to stop or move slowly through certain levels. A close look at any special education classroom would quickly reveal that many of these children would not be able to immediately participate in a game or story which required an ability to pretend. They are at earlier stages in the development of play skills. They would need specialized activities involving sensory stimulation, manipulation of toys, rhythmic games and songs. These exercises might focus on building an extensive sensory foundation (textures, sounds, shapes, tastes, smells, etc.). They would point towards expanding the number of ways a child might use the hands, the voice, or respond to others. Eventually, the play should turn outward to others (Peek-a-Boo, Hide and Seek, finger plays, rhymes, and songs). When interest and awareness of others reaches a peak then imitative play emerges (doing the same face, sound, voice or gesture). If children can mirror or imitate, they are demonstrating the ability to differentiate between themselves and others and reflect what they see. From this point on, there are many games which nudge and seduce the child towards participating in pretend. This imitative stage often seems long to adult observers but is a time when a child gains large blocks of information about how others behave. Pouring imaginary tea from a tea cup may not signal a child's thorough understanding of pretend but may be merely an imitation of others' play and is worthy. It is perhaps a transitional stage during which the child can gain some understanding of other ways to play. During these early stages, many games can be played which ask the children to move together, stop and start together, do the same, pass things along and follow the rules. Play has rules (either spoken or unspoken) just as does life. It is in play that we gain practice at following them. At play, we rehearse sharing, taking turns, waiting and controlling. The "spirit of the game" can and should be established with children at a very early age or primitive stage. All of this is the groundwork for internalizing the rules and teaching the skills necessary to eventually pretend.

A close look at a child's play can give one an excellent view of the total developmental level (speech, social, physical, intellectual, conceptual). Since play was the medium through which the child gained these skills, there is a special irony to the philosophy which encourages us to put play aside to educate the child. At the point at which most children enter an educational system there seems to be a rush to teach the child to sit still, keep mouths shut,

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hands off. The child has previously learned about the world through all the senses (many at the same time—whole body involvement—total sense stimulation). Suddenly much of the information coming at the child is through the eyes and ears. What happens to all the other "receivers," all the other ways to learn? What happens to that spirit of play—that drive, motivation, will? In the rush to teach the child the things we deem necessary and good, do we miss out on the teaching/learning method most familiar and most powerful in the child? This is the point in too many children's lives that the work-play dichotomy begins. Along with it comes a struggle inside the child. "Live through this lesson, which the teacher thinks is important so that we can go outside and move and laugh and feel free again." Surely laughter is not just for playgrounds. Sober faces and restricted bodies are not a prerequisite of learning. Playing can move inside the classroom. It need not take the place of any high-minded activity. Play can continue to serve as the medium through which children naturally learn about their bodies, voices, abilities and the world around them. The following is a list of skills one might develop through play: imagination; empathy; sharing; self-confidence; awareness of others; knowledge of body language; relaxation; pantomime; problem solving; aesthetic appreciation; self-control; self-awareness; patience; concentration; social skills; language skills; non-verbal communication; planning; pleasure in accomplishment; and creativity.

Handicapped children can also grow and develop through this expressive play. With the press of so much "catching up" to do, this area may not receive enough attention as a way to learn. Handicaps tend to limit the possibilities. Play expands the number of ways we have to respond, to express. It often involves multiple senses or the full body. Expressive play adds to the possibilities. Some teachers believe all this, but are so overwhelmed with record keeping and regulations that they find it hard to justify time for it in a school day. Others have tried it and found that it tended to wind up the children and chaos often followed. These teachers are hesitant to try it again. Some teachers fear criticism from fellow teachers or supervisors for "playing around." Many feel they lack the background or training to lead an expressive play session.

Play need not take the place of any lesson. It can be the lesson. Play can have a lesson plan with specific goals and can be justified as a learning experience to any potential critic. It need not create confusion or chaos if some thought and planning goes into the "game plan." Play can act as an adjunct activity to a lesson (i.e., the children read and study a story, then decide who will play what, they push back the desks and "play it out"). In a school setting a dramatic or expressive play session is not merely a free play time. It is thoroughly planned. It has a specific, yet flexible, structure and rules. This is not only necessary to maintain order but to establish a sense of safety for the children. The structure in no way should restrict creativity. It merely creates a framework in which we work-play. It is our responsibility to align the activities in such a way as to allow for a winding down time. This might take the form of a quiet song, a relaxation exercise, a soft-talk time, etc. If we wind children up, we must not expect them to magically turn off the energy at will. We must follow high energy activities with quiet relaxing ones.

Teachers soon discover that dramatic play (or expressive play or creative drama) is not about putting on a play for an audience. It is not product-oriented. The process of playing the game or story is pleasure enough. The pleasure, the satisfaction, the sense of accomplishment which comes of having done something well is a central goal. More and more teachers see that it takes no special training or experience in acting to create real drama and excitement in a lesson. It does require some thought, some planning, spontaneity and flexibility. Teachers who have used expressive play with some success discovered some wonderful things. They saw: qualities in students they had not seen before (patience, tenderness, humor, motivation and excitement); their own day was brightened by the addition of these activities; it served as a perfect diagnostic tool to measure the children's needs and strengths; it reminded them of the importance of play in their own lives.

How, when and where should expressive play activities take place? They can take place anytime or anywhere, or on a specific day, at a specific time of day, in a specific place in the room, and for special occasions. They can grow out of a particular lesson as a reward, as a release, as a follow-up to a field trip, as a form

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Play expands the number of ways we have to respond, to express.

An imagination is a powerful thing. We use imagination to set goals, make plans, solve problems and relieve stress.

While at play, we are free to try the new, dare to persevere, imagine the unseen, free the inhibition and dream the impossible.

Play is a source of learning and must find a home in the classroom.

of role play (policeman and a robber; a mother and a daughter); or they can focus on problem solving or be designed to build skills. They may be made up spontaneously to air a problem or explore both sides of an issue. They can illustrate a point, provide experience vicariously, or allow students to experience a lesson with the full body.

An examination of our own play experiences can guide us in planning activities for children. What pleasures were inherent in our play? What did we play and play again? Where did we love to play? What bothered us or frightened us about this game or that? What would have made it easier? What role did adults have in our play? How might they have been more sensitive to our needs? There are some stereotypes that need to be altered before play has a home in the classroom. Expressive play is not necessarily devoid of villains or scary things. Play can provide a time to test our courage, even to play the giant or the troll. Expressive games do not designate a winner. The pleasure of having followed the rules and giving it a good try is reward enough. Expressive play is not therapy but should always take place in a setting which is safe, supportive and which encourages the exploration of new ways to respond and express. It does not put children to the test, but provides for a time and place for children to test out or reach out to new possibilities within safe confines.

Once we are able to pretend, we are able to better control our response to new situations. We may be afraid, but choose to behave as if we are not. We may be angry enough to hit, but see that other options are better. Each of us use, in everyday life, the skills we learn at play. We are going for an interview and are nervous, we don't know who will be there, what they will ask, what we will answer. Unknowns abound. We proceed, "as if" we are confident and "as if" we will know what to say and do. We pretend.

We have real flu symptoms. Our heart throbs, our stomach churns. We must keep going. We have important work to complete this week. We can not be sick. We behave "as if" we are well and make it through the week. Then, when time permits, we get sick (the power of pretend).

The ability to view a situation in a new way, to change our viewpoint—to choose our response is a life skill. If we can adjust, adapt, create, we are no longer prisoners of our environment. We have the power to make a situation less painful, less stressful through our choice of response. An imagination is a powerful thing. We use imagination to set goals, make plans, solve problems and relieve stress. Adults use play skills everyday to enrich their lives and yet often do not view them as such. Braces, wheelchairs and learning disabilities can function as barriers or even prisons. Dramatic play expands the possibilities, creates alternatives, frees us of the bonds of limited expectations. While at play, we are free to try the new, dare to persevere, imagine the unseen, free the inhibition and dream the impossible. The ability to pretend is a gift exclusive to humans. It is ours to enhance and enrich our visions. It is our birthright. The skills involved closely parallel those in our total development and should grow as we do. No student need suffer a deficit of dreams. Play is child's work. Play is a source of learning and must find a home in the classroom.

A LIST OF THINGS WHICH MIGHT INSPIRE OR ENHANCE EXPRESSIVE PLAY

HAND PUPPETS need not be used exclusively in a performance setting, although adolescents can have a wonderful experience making a story, designing and making puppets and performing for friends. They can also be used informally (while being held in front of the body). This allows a student to involve the whole body and to have eye contact with other puppeteers while speaking. The story might be read or told by either student or teacher, as narrator, allowing for the lines or dialogue to be spoken by each puppeteer. Often puppets have created real chaos when used in an unsupervised "free play" setting. They can inspire aggressive behavior when not used with adult guidance. Once children have been guided through an experience which demonstrates the many ways puppets can gesture and express, children are less likely to rely on the limiting biting and hitting with them. This is not to say that, with an adult close at hand to guide and intervene, puppets should not be available for spontaneous conversations and improvisation. There should be introductory exercises first which expand the child's play vocabulary and some sensitive guidance throughout. Puppets provide children the luxury of playing out feelings and behaviors which they might not risk otherwise.

A COLLECTION OF HATS (baseball, construction worker, fireman, top hat, sunbonnet, cowboy, wedding veil, etc.) can serve as inspiration for spontaneous play or planned stories. The students might improvise scenes depicting people and their jobs, or after being given a hat, would do an appropriate gesture or short pantomime of the person's profession, then pass the hat on to someone else. Circle games might be devised similar to "Hot Potato" (one hat would be "it" or the "dreaded one").

COSTUME PIECES, aprons, gowns, vests, capes, scarves, etc. can inspire characterization or mood. Each student might be given a costume piece and be asked to pantomime an event or pair up with another student and improvise a scene.

PHONOGRAPH RECORDS can be the basis for a movement session involving imagery or can create mood to enhance a scene. There are also records which narrate a story. ("Peter and the Wolf," "Tubby, the Tuba," "The Little Engine That Could," etc.) Students, of course, love to enact the story as it is told. Music can slow children down, help them relax, or energize them. Many teachers play it softly throughout the day. Music can aid in picturing or imagining fantasy events (i.e., "Dance Macabre," "1812 Overture," "Night on Bald Mountain"). Dance dramas can be created with each character responding to a different section of music. Some records are designed specifically to guide students through expressive play or movement experiences.

FABRIC can be used for costume pieces or to designate specific acting areas. Children have used fabric scraps for shawls, boats (that slide easily on a smooth floor and can pull other passengers along), tents, room dividers, capes, beds, and wondrous things too numerous to count. Teachers might use large pieces in games that require cooperation. As a substitute for a parachute, the fabric is much more manageable and can be used in a confined area. The children can lift, lower, shake, catapult a soft object, duck under etc.

CHAIRS AND DESKS can become boundaries, buses, coaches, boats, tunnels, bridges, etc. Doing so, models to the students the fact that one may use the resources at hand to create mood and setting. We need not have the real thing to play. Our imaginations are stretched each time we must use one thing in place of another (using torn paper for grass, blocks for cars, chairs for an elevator).

BOOKS are often the springboard for playing out a story or inspiring a new story. Teachers should feel free to adapt and change any story to suit the needs of students. The students might act out the story while someone narrates or they might speak the lines themselves. Simplify, adapt, alter anything which might give the students the opportunity to move around and explore the feelings involved in any story. Assign roles, informally rehearse it in sections, side coach each child, try scenes that involve aggression or violence in slow motion, (the feelings of the characters can be experiences, but in slow motion everyone feels safe). Try the story with costume pieces and mood music. The story becomes an unforgettable experience for anyone who has "played it out."

SONGS AND POEMS often tell a story or describe a scene which becomes alive for children if they can use the whole body and enact it in a game or story form.

DREAMS AND REAL-LIFE ACCOUNTS told by the students are a wonderful way to capture excitement and to begin a "let's act it out" session.

FIELD TRIPS AND CLASSROOM VISITORS can be followed-up by role-playing or imaginative story making.

RUBBER FARM, ZOO OR HUMAN FAMILY SETS are easily moved and controllable for small hands and therefore often inspire students to spontaneously play out troublesome feelings.

TYPEWRITERS AND TAPE RECORDERS can be used to quickly record a child's ideas for a play, story or poem. Dictating an idea to the teacher can allow hesitant children or children with speech difficulties to have their ideas shared and enjoyed by others.

SUPER 8 MOVIE CAMERAS AND VIDEO TAPE CAMERAS record children's spontaneous or rehearsed activities and can be used for immediate feed-back or viewed later for class discussion.

NEWS EVENTS AND MAGAZINE PICTURES are great sources for story making and provide students a way to better comprehend the world around them.

ACTOR'S GAMES AND EXERCISES are often designed for focusing on some skill or sensory experience which is appropriate for students.

SHADOW-PLAY BEHIND A LIGHTED SHEET allows even the most hesitant student the protection of anonymity.

SPOTLIGHTS, OVERHEAD PROJECTORS AND SLIDES can transform a room, set a scene or change the mood (drawing the blinds and lowering the lights can be a simple mood changer).

RESOURCES MENTIONED

- "Peter and the Wolf," Sergei Prokofiev
- "Tubby, the Tuba," George Kleinsinger and Paul Tripp
- "The Little Engine That Could," Watty Piper
- "Dance Macabre," Camille Saint Saens
- "1812 Overture," Peter Illich Tchaikovsky
- "Night on Bald Mountain," Modeste Moussorgsky

DRAMATICS: CENTER STAGE IN THE EDUCATION OF THE DEAF

RICHARD C. NOWELL

RICHARD NOWELL is an Assistant Professor in Education of the Hearing Impaired at the University of Pittsburgh. Dr. Nowell received his doctorate from the University of Rochester's Center for Development, Learning, and Instruction and did postdoctoral studies at the Pennsylvania State University. While pursuing his Master's degree at New York University, he was involved in using dramatics both as a teaching tool for deaf students and as an extracurricular activity. Later he continued his interest in theatre as a faculty advisor of the drama club at the National Technical Institute for the Deaf. Dr. Nowell has had extensive experience as an actor and director in dramatic productions with both deaf and hearing theatrical groups.

The talented deaf people that have been seen in dramatic productions on Broadway and television have contributed much to destroying the stereotypic image of "deaf and dumb."

A rehearsal of a theatre production of the deaf is a busy, creative activity.

Ever since the National Theatre of the Deaf took the country by storm in the late 1960's, it has been no secret that deaf people are talented actors and actresses. Until then this silent minority had been largely an invisible one also. Not only is the number of deaf people so small—only about 500,000 in the United States (Schein & Delk, 1974)—but the disability of deafness is not easily noticed unless one sees deaf people conversing with sign language or has occasion to communicate directly with a deaf person. (In this paper, "deaf people" means those who cannot use their hearing as a primary channel for developing language, usually those who were born deaf or lost their hearing in early childhood, that is, the prelingually, severely to profoundly deaf.) Deaf performers are now a common sight to most people with several television specials featuring deaf performers during recent years. A deaf person even appears regularly on "Sesame Street." High School drama clubs, post-secondary drama programs, and community theatre groups for the deaf have sprung up all over the country, presenting talented deaf artists to both deaf and hearing audiences. And in 1980, a deaf actress even walked away with a Tony Award for her performance in the Broadway production of *Children of a Lesser God*.

The talented deaf people that have been seen in these dramatic productions have contributed much to destroying the stereotypic image of "deaf and dumb." On the other hand, one would be wrong to suggest that deaf people are all talented dramatic artists any more than hearing people are. Deafness has a far-reaching influence on the developing individual. But theatre and the dramatic arts can be used as an effective means of contributing to the optimal development of deaf children.

The enhanced image of deaf people generated through theatre may indirectly open doors for all deaf people, but drama also benefits the participants more directly. As an artistic endeavor it may provide a rich contribution to the life experiences of deaf people. As a teaching tool it may more easily allow the innovative teacher to meet instructional objectives in various parts of the curriculum. As a therapeutic tool, it may be used to give deaf children experiences to help them overcome common problems in social development.

As an artistic endeavor, theatre involves many of the other arts. Not only are deaf participants able to find new roles as actors and actresses, they are also able to find roles as designers, make-up artists, set builders and decorators, costume makers, and lighting engineers. As all of these arts are brought together by directors to form a pleasing whole, deaf people can observe their formation of a true work of art. A rehearsal or performance of a theatre of the deaf is a busy, creative activity, and observers quickly lose any image they may have had from other sources of a deaf person's silent, lonely, depressed life. Here one can observe artists at work, expressing themselves, using their creativity in an experience that not only enriches their lives by their participation but also enriches the lives of many who are fortunate to observe their work.

Such an experience is not always the rule, however. In fact, deaf people often lack many experiences that those with normal hearing have in their everyday lives, and the cognitive implications of this "experiential deficiency" have been discussed in detail elsewhere (Furth, 1966; Liben, 1978). Although it is certainly desirable to optimize the cognitive development of deaf people, it is also crucial for educational programs to provide an environment that is personally satisfying—one with opportunities for enrichment through activities beyond the

basic needs for existence. The arts in general, and drama specifically, can contribute much to the lives of deaf people. Providing a channel for creativity and artistic expression through theatrical performances has already opened new doors for enjoyment in the lives of many deaf people and will continue to do so for many others, if the educational system gives them this opportunity. Such opportunities for creativity have not always been common, and, unfortunately, are still rare in some schools.

Our present educational system has tended to overlook this fundamental process (creativity). Our schools emphasize the need to learn factual information. To a great extent the passing or failing of courses is predicted on the ability to master or memorize certain bits of information that are already known to the instructors. On the whole, our present educational process is too exclusively verbal and cognitive. . . To achieve an adequately balanced, diversified program in general education which will meet the various needs of all students, more emphasis will have to be placed on esthetic and creative aspects of learning. (Duke, 1974, p. 9)

Of course, one must also see that the content of courses are taught well in the school system, and drama can be used successfully for this purpose. Many teachers of hearing children are successful in conveying information and concepts to their students despite their reliance on methods of presenting information by rote. But students with special learning problems or sensory processing difficulties do not overcome uninspired teaching very easily. Moores (1978) comments on the lack of special methods in teaching deaf children:

Although the education of the deaf is viewed by much of the lay public and, unfortunately, by many of its practitioners as an esoteric, somewhat mystical process, very little has been done in the way of development of special curricula outside of language and speech training and auditory training. In other areas, especially those involving traditional academic subjects, the tendency is to rely on texts, courses of study, syllabi, and curricula designed for students with normal hearing. Sometimes the material is adopted without change, and sometimes it is modified—which typically involves simplification of vocabulary used. (p. 257)

A teacher may find that the use of drama in the classroom can contribute first as a great method of motivating students and focusing their attention on the subject material. One must not be naive enough to expect, however, that a teacher will be an instant success in involving students in dramatic portrayal of classroom lessons. Deaf children often must have such methods introduced early in their education to accept such innovation without resistance. I have had the experience of trying to use dramatization of literature as a teaching method in language arts for high school students only to be told adamantly by the students, "We can't do that." Fortunately most young children tend to have fewer inhibitions and drama can often be introduced successfully in primary and even pre-primary programs.

In addition to serving as a motivating activity, dramatic portrayal of literature, history, current events, and social issues can serve as an effective manner of teaching concepts. One problem in teaching concepts to deaf children is that verbal cues are so often the teacher's primary manner of conveying critical features, and many deaf children are not able to use this input effectively. By an active participation in a dramatic portrayal of a lesson, however, the students may more successfully attend to critical aspects of concepts. This focus may assist them in incidental learning that is available to hearing children through auditory input.

Teachers of deaf children may also have difficulty in assessing whether the children have successfully learned concepts. Testing procedures often depend heavily upon the deaf children being able to interpret written questions. Many deaf children do not excel in this ability and their attempts to demonstrate mastery of information may therefore be hampered. In the context of dramatic portrayal of lessons, the teachers of deaf children may have more opportunity to see children demonstrate mastery of concepts. Drama tends to stimulate more questions and discussion, thus opening up channels of communication that are often absent in the regular classroom setting.

In classrooms for deaf children, Craig and Collins (1970) observed that deaf children are predominantly receivers of information from teachers. The active

One must not be naive enough to expect that a teacher will be an instant success in involving students in dramatic portrayal of classroom lessons.

Deaf children must have these methods introduced early in their education to accept such innovation without resistance.

Drama allows deaf children to focus on incidental learning available to hearing children through auditory input.

In drama, teachers may see deaf children demonstrate mastery of concepts.

Educational agencies must incorporate programs that assist the personal and social development of deaf children in addition to programs aimed at academic development.

Dramatic portrayal of a lesson can serve as an experiential learning task to by-pass language difficulties, while at the same time stimulating discussion and verbal exchange.

Involvement of deaf children through drama may assist not only in overcoming this undesirable predominance of teacher-initiated communication in the drama activity itself, but may also generalize to active participation in other classroom activities. The nature of the language usage in classroom drama is more dynamic than in most classroom situations, teaching the child "immediately to modify, correct, or develop his use of language as he goes along" (McGregor, Tate, & Robinson, 1977, p. 33).

In addition to addressing academic progress and classroom learning, educational programs for deaf children must be concerned with social development. This is especially true in view of the difficulties that many deaf children have in social development. Meadow (1980, pp. 74-97) summarizes the literature concerning social and personality development in deaf children, and indicates that there is evidence of divergent characteristics and socially less mature behavior among many of these children. Deaf children have been noted to be egocentric and to lack a capacity for inner creativity. They are often more rigid than hearing children in new situations. Their interpersonal contacts seem to be more superficial and many show social isolation. Their behavior may show an inability to integrate experiences meaningfully. Many deaf children have a lack of self-esteem and poor impulse control.

One could challenge the above observations (see, e.g., Moores, 1978, pp. 140-152), and certainly many deaf children demonstrate mature social behavior and healthy personality characteristics. However accurate specific observations have been in terms of the general social behavior and personality traits of deaf children, educational agencies must incorporate programs that assist the personal and interpersonal development of deaf children in addition to programs aimed at academic development.

Such emphasis is especially important to deaf children who are in residential schools and somewhat sheltered from the hearing community. Furthermore, the recent move to "mainstream" hearing impaired children in regular public schools is not a panacea. In fact, many deaf children in public schools may experience more isolation socially than children in special schools who can relate relatively easily to their deaf peers. Many public school programs for the hearing impaired do not have social activities after school that are aimed at providing good social training for deaf children, whereas many special schools have programs of this kind. Whatever opportunities are available in after-school programs, the incorporation of creative drama in educational programs can certainly address some of these needs, either as part of regular classroom activities, as therapeutic exercises, or as artistic activities.

A deaf child participating in dramatics has the opportunity to see the world through another's eyes, whether assuming the role of a character in an actual theatrical production or just role-playing. Communication patterns in many deaf children may omit some aspects of interpersonal information that aid in overcoming egocentricity (see e.g., Greenberg, 1980). Role-playing that is followed by discussion of how the various people portrayed were perceiving the situation may help deaf children understand others in social situations and develop more meaningful interpersonal relationships. Role-playing that specifically addresses the "deaf experience" may help these children to understand themselves better, to raise their self-image, and consequently to develop better internal control (see Harris, 1978).

Because deaf children may have been sheltered by protective parents and by schools, they may exhibit behavior that shows a restriction in breadth of experience. It often is not practical to try to provide certain experiences in the real world that will help to fill this void, but the experiences that deaf children may have in role-playing activities are limited only by the creativity of the teacher and the children's willingness to participate. As stated previously, the willingness of children to try such activities is fostered by introducing the activities at a very young age. To develop an ability to integrate experiences meaningfully, the astute teacher will encourage deaf children always to relate role-playing situations to their own lives.

I have suggested that dramatics can enrich the lives of deaf children as an artistic endeavor. As a teaching tool in the hands of an innovative teacher, dramatics and role-playing can motivate deaf children to learn. It can assist in focusing attention to critical features of concepts being discussed. Dramatic

portrayal of a lesson can serve as an experiential learning task to by-pass language difficulties, while at the same time stimulating discussion and verbal exchange. Deaf children who participate in role-playing may become more active learners. As a tool to foster social maturity, role-playing and dramatics may help to overcome egocentricity, rigidity in adjusting to new situations, and experiential deficiencies. Role-playing may lead deaf children to understand themselves better and to raise their self-esteem.

For all of these benefits to take place, of course, opportunities to participate in dramatics must be available to deaf children. Although artistic involvement by deaf people in professional, community, and school dramatics is possible in many places, more emphasis should be placed upon creative dramatics and role-playing activities in educational programs. Administrators and supervisors of educational programs for deaf children should provide support for such activities inside and outside the classroom. They should encourage their use in the classroom by fostering in-service training for interested teachers. Post-secondary training programs in education of the hearing impaired should provide pre-service training in dramatics for prospective teachers as a regular part of the curriculum or through special workshops. Cooperative learning activities with educational theatre programs may benefit both future teachers of the hearing impaired and theatre students who might be interested in working with this special population.

These comments are intended to encourage those who already are making use of dramatic activities and to stimulate those who are not to make some attempts even if very modest at first. The benefits are worth the price of the additional effort. In the words of Charles Duke (1974):

Our basic task in education is to discover appropriate strategies that take individual differences into consideration but that do so in such a way as to foster the development of the individual. Creative drama, with its emphasis on personal involvement and attention to the experiential backgrounds of the participants, offers individuals a wide range of opportunities for discovering and achieving their aspirations. The child, whether he is handicapped or normal, profits from confrontations with practical and social problems as well as with personal issues. Creative drama provides the student with opportunities to learn through doing and to enjoy and know what it feels like to use the creative part of himself. (p. 52)

Deaf children who participate in role playing become more active learners.

As a tool to foster social maturity, role-playing and dramatics may help to overcome egocentricity, rigidity in adjusting to new situations, and experiential deficiencies.

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THEATRE MOVEMENT FOR THE BLIND AND VISUALLY IMPAIRED: TWO SUMMER SESSIONS

FOREST D. FEIGHNER

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The challenge of teaching blind students kinesthesia, theatrical art, and visual communication was irresistible.

Warmup exercises aid in the development of perfect posture, deep diaphragmatic breathing, concentration, and they engender an atmosphere for creativity.

Simple stretch exercises, such as a neck roll, were difficult for these blind students, indicating muscle tension and a lack of control in muscles that do not get exercised.

During the summer of 1979, Dr. David M. Rice, Director of the Office for the Visually Handicapped for the Edinboro State College Summer Blind Program, explained his difficulty finding someone who could effectively teach kinesthesia. Dr. Rice was aware of my interest in mime, hatha yoga, and various styles of theatre movement to improve the human body as an acting instrument. An article by Lavene Loeschke, "Mime: A Movement Program for the Visually Handicapped," prompted Dr. Rice to ask me to teach kinesthesia to a small group of blind students in the college preparatory program who were having difficulty with body coordination and control, spacial awareness, and socially acceptable behavior. The challenge of teaching blind students kinesthesia, theatrical art, and visual communication was irresistible. An orientation appropriate to the kinetic art of pantomime seemed to be the best way to begin.

Pantomime or Mime is a theatrical art of storytelling by developing a character, theme, emotion, and action using the body as an instrument of expression. Mimes such as Marcel Marceau have inherited their art from the ancient Greek *mimos* (mimes) who imitated persons by using broad farcical gestures. In Greece, pantomimos or pantomime was the art of expressing oneself with mute gesture. Today mime and pantomime, as words, are often used interchangeably. Generally, contemporary mimes use white face makeup and pantomime appears as stage business in modern realistic plays. For our purposes, pantomime is telling the story not with words, but with facial expression, hand and arm gestures, body poses, and movement.

The students for the first class in Pantomime were two blind young men and one blind young woman. They did not quite understand why they were in the Old Union Theatre, but they liked the idea of studying drama. Kinesthesia was in the background as the students stood hand in hand encircling me at center stage. We began warmups.

Warmup exercises aid in the development of perfect posture, deep diaphragmatic breathing, concentration, and they engender an atmosphere for creativity. Observation of students during warmups can reveal abilities and limitations concerning individual movement. Exercises begin with experiencing perfect posture and deep breathing. The sensation of a correctly aligned relaxed body will give confidence in a movement through space. Simple stretch exercises, such as a neck roll, were difficult for my three blind students, indicating muscle tension and a lack of control in muscles that do not get exercised. Astonishingly, simple nods of the head that we do daily for the sake of communication, consciously or as impulsive body language, are also beneficial physical exercises. We may nod our head yes or no when asked a question, but a blind person who has not seen or has forgotten or has not been taught to shake his/her head "yes," might not ever think of using such a symbolic gesture him/herself. Not only is there a loss of communication, but there is also a loss of physical exercise. Thus, development of the body and breathing as a basis for movement and observations make the initial warmup an important part of every class.

During my orientation of the students to the stage space, walking through the fifteen stage positions, discussing the space and explaining basic acting areas of the stage, I realized the necessity of establishing oral communication. Through spoken words, blind students could be taught to practice a visual form of art.

After an orientation to the stage and warmup exercises, simple pantomimic gestures were introduced to create a pantomimic action. The exercise consists of

having the students say without words: "Hi!" "Have a beautiful flower." "I love you." "Goodbye." The students responded enthusiastically to this pantomimic exercise calling for perfect posture, muscular coordination, spacial awareness, and visual communication. How difficult seemingly simple actions were for blind students, necessitating a descriptive means of explaining gestures. A step by step, biological-mechanistic explanation, influenced by Vsevolod Meyerhold's biomechanics, was used as a way of explaining the efficient use of the body as a machine of artistic expression.

The first class revealed how slow progress would be. Simple gestures that people with sight take for granted may be unknown to blind students. To explain exercises, precise biomechanic oral directions were needed. Developing a sense of vertical and horizontal planes of stage space was necessary. Students were tired from exerting seldom used muscles in great need of flexing and stretching. Most importantly, kinesthesia and theatre had come together.

The students were eager to begin the second day's lesson. We started with a review of the basic stage positions. From center stage the students moved to other positions, such as down right center or up left center. This exercise made apparent individual differences in abilities to orient oneself in stage space.

During warmups, posture and deep breathing were reviewed along with a review of the head roll. In addition to the muscular tension I had observed in shoulders there was a general fear of disorientation when students were asked to roll the head back. Keeping the students in correct alignment helped. Further stretch and relax exercises were then introduced.

The class assignment was a carry over from the pantomimic action introduced in the first class: adding an emotional communication to an imaginary person. Concentration and precision of movement were the keys to success. The routine was repeated a few times for polishing the gestures and facial expressions while being aware of releasing emotions held deeply within. In this case the expression of love was emotionally rewarding.

Next, sense awareness exercises were introduced. The pantomimic handling of objects dramatized a general difficulty in sensing the size, shape, texture, temperature, and spacial position of objects. The use of objects to handle for sense recall was demanded. Also the students were encouraged to develop their sense awareness when handling objects in everyday actions such as eating, opening doors, or going up steps, as a means of creating pantomime.

Universal gestures introduced a visual communication vocabulary. People with sight often use "universal" gestures such as "This long," or "O.K." Body postures, facial expressions, and hand gestures make speech animated and interesting. Moreover, a surprising amount of physical exercise takes place while gesturing. A basic reason for the lack of awareness or subconscious use of such gesture is that it is mimetic. Our gestures are developed from infancy in imitation of those around us—if we do not see we simply do not imitate. Lack of animation makes some blind people seem wooden and unnatural. What are believed to be universally used gestures are unknown to people who have not seen or been taught even the most common gestures, such as "Yes," or "No," or "I don't know." Gestures also gently use muscles, joints, and tendons while releasing feelings and emotions that might otherwise remain pentup. Building a vocabulary of "universal" gestures aids physical communication, develops control and coordination, and enhances social acceptability. As an assignment stressing creative use of universal gestures, the students were asked to perform a story using the learned gestures.

By the third lesson an additional student joined our group. The new student was visually impaired but not totally blind as were the other students. She soon became a group leader, and was extremely helpful as we came to our most challenging and interesting task—a performance of the pantomimic play within a play from *Hamlet*. Since two students, especially one, had more difficulty with all exercises than the others, more time was allotted to these students.

Upon reading the pantomime "The Murder of Gonzago" from *Hamlet* to the class, they decided to do the performance as a final project with an invited audience. The parts of the King, the Queen, the Poisoner, and the Mutes were assigned and we began rehearsing with a review of the stage positions. We walked through part of the action up to the Poisoner's exit. The students were enthusiastic about the idea of performing Shakespeare. The remaining classes

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There was a general fear of disorientation when students were asked to roll the head back. Keeping them in correct alignment helped.

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Our gestures are developed from infancy in imitation of those around us—if we do not see we simply do not imitate.

centered around this performance. Warmup exercises continued to review and introduce exercises for posture, stretching, relaxing, concentration, universal gestures, and handling objects. Everything we stressed in the class culminated in the performance of "The Murder of Gonzago."

The first summer program had the aim of teaching kinesthesia through pantomime and theatre movement warmups. Principle goals were to teach the students body control, spacial orientation, and social behavior. The classes consisted of various exercises geared to make the students conscious of perfect posture, deep breathing, relaxation, concentration, body movement, the isolation and control of extremities, and sense awareness. Pantomime uses the body, leg movement, arm and hand movement, and facial expression to communicate. By putting visual symbols together a mime can create a work of theatrical art. The class learned "universal" gestures and pantomimic actions. Each student made satisfactory progress in terms of individual ability going into the class. Sessions were limited in number, but sufficient learning took place to be noticeable.

Four people completed the course. The final experience was the pantomimic "The Murder of Gonzago" from Hamlet by William Shakespeare. A performance of this pantomime for an invited audience allowed the students to create characters and tell a story using gesticulation and public concentration. The audience completed the program by allowing the class to be admired and appreciated for the progress they made.

The second summer program for the blind and visually impaired retained the fundamental premise of the original with three material changes: (1) more class sessions, (2) a larger class with only one completely blind student and one with remarkable movement, (3) elements of dance-theatre were introduced. The final performance included a dance to a musical number from Shenandoah, in addition to "The Murder of Gonzago."

Including dance broadened the methods of the course in the more general idea of theatre movement; that is, any movement appropriate for dramatization and theatrical art. Such movement is a perfect vehicle for teaching kinesthesia in a practical way having to do with body development, coordination, and spacial awareness in the use of muscles, tendons, and joints.

Ability among blind and visually impaired students varies. Each person should be treated as an individual with talent to develop. During the second year, once again, students reached levels of performance beyond their own expectations. One considerable task occurred when a completely blind student picked up a handkerchief dropped by another some distance away. A reasonable generalization is that theatre movement will be of benefit to all students no matter their ability!

A visually impaired student aid, Barbara Siple, had taken Fundamentals of Acting and performed in Candide; she was creative, a helpful disciplinarian, and a marvelous role model.

Counselors for the visually impaired from the Commonwealth of Pennsylvania paid the class an unannounced visit. After watching the entire class with interest the counselors recommended extending the use of the class for all students in the Office for the Visually Handicapped/Summer Blind Program.

The most important generalization from the empirical study of blind and visually impaired students learning pantomime and theatre movement as a therapeutic method of kinesthesia is that it works! Awareness of the sensitive internal movement of the body as emotion and the expression of externally controlled physical movement develops a practical sense of the kinesthetic use of the body, building body strength, coordination, and the use of the body in space. Expressing artistic impulses through the visual instrumentation of the body by learning visual communication, universal gestures, pantomime, theatre movement and stage space ending in group performances also improves human relationships. Therefore, blind and visually impaired students who study theatre movement will gain therapeutic and artistic rewards.

Each person should be treated as an individual with talent to develop.

Awareness of the sensitive internal movement of the body as emotion and the expression of externally controlled physical movement develops a practical sense of the kinesthetic use of the body, building body strength, coordination, and the use of the body in space.

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MIME IN EDUCATION: A DEVELOPMENTAL PROCESS

LOLA H. KEARNS

In association with
DAVID & CAROL GEYER,
IMAGIMIME

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DAVID AND CAROL GEYER, IMAGIMIME, have performed for numerous schools, colleges, arts festivals and other agencies on the East Coast. They also appeared at the 1st Festival of American Mimes, Milwaukee, the Tapestry Theatre, New York City, and the University of Puerto Rico, San Juan. Television credits include performances for "Evening Magazine," "Hocus Focus," "The American Trail," and the Pennsylvania Easter Seal Society's 1979-80 promotional commercial. In addition, the Geyers serve as consultants for the use of mime in general and special education.

The techniques of mime as used in the classroom are flexible, allowing for the students' own variations on an action or idea.

Through mime, students are given opportunities to discover more about themselves, others, and their environment.

The art of mime has gained visibility and popularity in recent years via television programs and commercials. The exaggerated and/or symbolic facial and body expressions of the mime have appeal for and promote response in most people. Whether humorous or poignant, mimes imitate life. They project the illusion of an object or action without props or words. Yet, through selected and precise movements calculated for economy, they give the viewer the feeling that the object or action is real. Pulling imaginary ropes, creating imaginary walls, walking in place, and climbing stairs are but a few of the more familiar illusions.

Mime, as an art form, need not be solely a performance for an audience; it can be a participatory learning experience in the classroom through which students can develop creative, expressive, perceptual, motor, social, and academic skills, as well as self-esteem. Students eagerly imitate the actions of the mimes. At a more advanced level, they are intrigued with the idea of conveying their own thoughts and feelings in a non-verbal way.

While all students enjoy working with the techniques of the mime, those who have hearing and/or language impairments are especially encouraged in this non-threatening, "silent" modality. In the classroom, silent action also generates attention and concentration on the part of students as they want to know what is happening and to be a part of it. Words are kept to a minimum.

The techniques of mime as used in the classroom are flexible, allowing for the students' own variations on an action or idea. Each student participates at his/her own ability level. Physically handicapped students are encouraged to use those parts of the body that they can move expressively, even if it's only the face. Students who have not yet developed the ability to pretend may simply imitate the actions of others in the group and thus feel a part of the activity; they may come to understand the meaning of the action especially if it is reinforced with concrete or symbolic illustrations drawn from prior experience. Students having poor social development strengthen their interactions with others in a secure and controlled spirit of play in which boundaries of appropriate behavior are clearly defined. Through the mimetic process blind or visually impaired students learn about gestures and facial expressions tactily or kinesthetically. If students have difficulty understanding expressions focusing on abstract ideas or concepts, narration can be added or minimal properties supplied; a cut-out heart may symbolize "love." The mimetic experience must, in any event, be structured with careful consideration for the ability of each student.

David and Carol Geyer, of Imagimime, have demonstrated the great value of mime in education through their work with thousands of handicapped students. As consultants to the Arts in Special Education Project of Pennsylvania, they have provided numerous mime performances, student workshops and teacher in-service programs. Many of the following suggestions for planning and implementing mime experiences are derived from observations of their work and from their own statements, both oral and written.

"In the classroom," the Geyers explain, "the basis of mime is discovery." Students are given opportunities to discover more about themselves, others, and their environment. They recommend that every mimetic experience should start with selected warm-up exercises that limber muscles and stimulate

participation. These activities can be structured to increase the range of movement and body control and the understanding of spatial relationships. They also provide teachers with situations in which they can observe the students' strengths and weaknesses—information which can be utilized developmentally in planning future experiences.

In the beginning, most students feel more comfortable imitating a leader's movements; as confidence builds, the students themselves will take on the leader role. Using a game format, such as "Follow-the-Leader," students can practice general or specific body movements. The Geyers suggest that teachers design imitation sessions appropriate to student skills; they offer an example:

In a circle, the leader shows different body parts that begin to "go crazy." The leader's arm goes up in the air, students follow. The leader pulls the arm down—it stays down for a few seconds and then bounces back up. This can be done with different parts of the body (elbow, knees, legs, head, etc.) on the suggestion of the participants.

The Geyers emphasize that "There are many other warm-up exercises that one can create, like playing with an imaginary parachute, pretending to be a marionette that moves different parts of the body, and numerous other ideas." They describe two additional activities they have used with much success:

CHOCOLATE Standing in a circle, ask the students if they would like some chocolate. Ask them to reach into the center of the circle, get a piece of chocolate and eat it. Then have them eat another and then, if they want more chocolate, have them reach into the air, grab handfuls of chocolate and put it into their pockets. Also have them try and grab the chocolate with their feet, heads, etc. Then have them show you with their hands just how much chocolate they have in front of them. Everyone then pretends that they are at a football game and that they are going to throw chocolate to the players, except they should keep one piece for themselves—then, eat it!

BALLOONS Have each student blow up an imaginary balloon. Have them show you what shape it is and ask them what color it is. Tie a string to the balloon and hold it up in the air. Let the balloon pull you up in the air. Pull it back down. Grab two more balloons and let them pull you up in the air. Let go of the balloons—all of the balloons float up to the ceiling. Now everyone takes an imaginary pin, "places" it on some part of the body (e.g., top of the head) and when the instructor says "go," everyone pops balloons with that body part. Continue placing the "pin" on different parts of the body suggested by the students.

Handling imaginary objects is an important technique of the mime. In order to create the illusion of an object, the mime must first "know" and then "show" its shape, weight and function. The Geyers make this suggestion: "It is best to work first with an actual object. This way the students have a chance to explore it—to touch it, feel its weight and find out what can be done with it." This type of activity develops perceptual skills and builds what Shepard (1971) identifies as "sense memory." The Geyers choose objects that have varying shapes, sizes, textures, and weights, such as a ball (beach, "Ping-Pong", "Wacky"), a brick, a large heavy book, a scarf, a feather, a "Slinky," or stuffed animals. The Geyers continue: "After the students have had a chance to explore the object, ask them to show it in an imaginary form."

The next step, according to the Geyers, is to have the students "create" imaginary objects of their own selection. Depending on the level of the group, the Geyers either "create" an imaginary box or present a real, empty box in the center of the circle of students. They then ask each student to take out an object of his/her choice, showing in mime the various features of that particular object. The other students may guess what the object is. For some children, it may be necessary for the teacher to "talk them through" the process—others will need no prompting. If this activity goes well, the Geyers expand it into an improvisation that includes the entire class; for example, if a student pulls out a pizza, they have that student cut it and give everyone a piece; then someone else can pass out sodas to drink.

Sometimes children enjoy the challenge of "being" an object, such as a machine or tool—this can be done individually or three or more students can portray one machine with its movable parts working in unison. The students may choose to use sounds to further establish the reality of the object. This activity can

Warm-up exercises limber muscles and stimulate participation.

Handling imaginary objects develops perceptual skills and builds a "sense memory."

Characterization can be as simple as imitation or as complex as conveying specific attributes of a particular personality.

Mimetic techniques provide an effective method for analysing, refining, elaborating upon, and sharing student narratives.

Closing activities, issuing logically from the preceding mime experience, should reduce energy level and prepare students for the next part of their day.

also lead to improvisation by having other students interact with the machine—plugging in the electric cord, turning it on or off, making it run fast or slow, controlling its function—all without words. One machine that is especially fascinating to our current population of young people is the robot; they seemingly never tire of perfecting robot-like movements, a technique which requires the development of concentration, recall, and physical control.

Characterization is another area of mime which can provide rewarding and meaningful experiences for students. In the classroom, characterization can be as simple as imitating the overt actions and facial expressions of a person performing some task, or as complex as feeling internally and conveying externally the specific attributes of a particular personality. The Geyers have found that miming a person engaged in a task—such as a policeman directing traffic or a nurse taking a patient's temperature, etc.—is a good starting point from which many extensions can be made. As the students' skills of observation and recall increase, so does the accuracy and complexity of their characterizations and, more importantly, their understanding of others as well as of themselves. The characterization of animals is also a valid approach with many children. They must first study and identify the significant movement patterns of various animals, practice and refine them, then demonstrate their interpretations to their peers. Students may extend upon this experience by forming teams of three or four working simultaneously to interpret a complex animal such as an elephant, a dragon, or a turtle. Shepard (1971) recommends animal interpretations for professional mimes and actors as a way to perfect their skills in characterization.

Mimetic techniques provide an effective method for analysing, refining, elaborating upon, and sharing student narratives. The Geyers report highly satisfying outcomes of experiences in which students have first shared a written or spoken narrative and then, in small groups, developed mini-presentations in mime based on the narrative and shared with the class. In follow-through written or oral assignments, students typically demonstrate increased abilities to identify the critical elements of the narration, to arrange these elements in a logical sequence, and to link each component within a conceptual framework.

The Geyers also report a variation on this experience in which students are given a collection of objects and asked to develop a story based on it. When the students have begun to frame a narrative incorporating, for example, an egg, a bird, and a mixing bowl, the Geyers recommend assigning small groups to develop and refine the narrative through mime. These "performances" are then shared among the whole group. Discussion is focused on the words—the adjectives, the adverbs, the verbs—that accurately describe the gestures and the characterizations presented by each group. These insights are then employed individually or by the group to rewrite the original narration, promoting accurate word choices, expanding the vocabulary range, and developing confidence in written expression.

Improvisation can grow out of other activities, as previously described, or it can be the major focus of a mime session. The emphasis in improvisation is that the students spontaneously compose the action—the skit or story—as they "perform" in the class setting. Initially, at least, the teacher should provide the motivation or entry point; after some experience, students may be able to suggest ideas. Improvisations can be developed around objects, characters and/or situations. The focus may be on role playing, social issues, academic content, or any number of other areas of interest or need. Many ideas for improvisations can be gleaned from books on drama, such as Brian Way's Development Through Drama.

As warm-up exercises generate energy and prepare students for more involving mime experiences, closing activities should be utilized to end each session, bringing the energy level down and preparing students for the next part of their day. This activity should embody a controlling element and should issue logically from the preceding experience. It may require moving silently in slow motion around the room and back to chairs. Or, develop a story which takes the students on a peaceful journey and brings them back "home" where they pick up the materials necessary for the next lesson. If the classroom has been rearranged to provide space for the mime session, assign a different identity to the desks and chairs—they may be heavy rocks or rockets that must be moved

carefully and slowly to a specific place; the "movers" are so "exhausted" when they get the work finished, they have to sit down and rest. Relaxation exercises used in creative drama are also excellent. Way (1967) provides one that uses imagery:

Now—each of you is a block of ice, solid ice. The sun is right overhead, and is beating down on you with a really fierce heat, melting you from above—(slowly) melting you, until you are just a pool of water on the floor. (p. 78)

Mime in education is a developmental learning process. It is not intended to be a preparation for a polished performance on stage in front of an audience. There are times, however, when brief performances for small groups of peers and/or parents are beneficial for students. These occasions provide opportunities for students to demonstrate their capabilities, thus enhancing self-esteem. The teacher must make every effort to ensure that it is a positive experience. An alternative, which might be less threatening, would be to videotape shared "performances" in class which could then be shown to audiences. An added advantage of this approach is that the performing students can see it also.

Mime in the classroom may range from brief moments of expression to well-rounded experiences which have a beginning, a middle and an end. Whatever length of time is allotted, or whatever structure is designed, the experience should be an enjoyable, rewarding one for both the students and the teacher. Varying levels of support can be provided in the following progression of working procedures: 1) all individuals working at the same time in a large group setting—everyone is busy, so no particular person is in the "spotlight," e.g., "Balloons"; 2) large group interactions—working together spontaneously but with direction, e.g., the pizza improvisation; 3) sub-groups of students working together toward a common goal, then sharing their "solutions," e.g., group machines or animals; 4) individuals ready to perform in a "spotlight" position. This progression can be achieved in an hour with some students, in weeks or months with others, and perhaps never with still others.

Class control is highly important and influences how much enjoyment can be derived or progress made in a mime session. The silent, non-verbal nature of mime is one built-in control. Signals, such as the word "freeze" or a particular sound or visual cue, provide control in an intrinsic and positive way.

Another factor that must be considered when planning the mime session is that in mime, as in any other content area, everything is not appropriate for everybody. For example, most students enjoy painting their faces with mime makeup and develop a better awareness of facial expression in this manner, but there are a few students for whom this would be very detrimental (painting a face on the hand is an acceptable alternative for some). Fantasy is another area in which caution must be exerted; again, for most children this is a positive motivation, but for those who have problems distinguishing reality from fantasy, it could be devastating. As has been mentioned before, the key is to know your students and design experiences accordingly.

While mime is not a panacea for all the problems that can beset a handicapped child, it can contribute positively to the child's development. Through mime experiences, attitudes and behaviors can be shaped, life skills can be learned or reinforced, and success can be a personal realization. The art of mime has a valid place in the classroom.

Mime in the classroom may range from brief moments of expression to well-rounded experiences which have a beginning, a middle and an end.

Some elements of a mime activity may be inappropriate for a particular student; adaptations or alternatives are necessary.

Through mime experiences, attitudes and behaviors can be shaped, life skills can be learned or reinforced, and success can be a personal realization.

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MUSIC

MUSIC: AN INTEGRATIVE APPROACH TO LEARNING FOR THE SEVERELY AND PROFOUNDLY RETARDED by Phyllis Boone

...relates a number of characteristics of severely and profoundly retarded students' responses to music and pinpoints the implications these have for teaching music.

MUSIC AND THE CHILD WITH SPECIFIC LEARNING DISABILITIES

by Cynthia Briggs

...stresses adaptation to known music activities as means for bringing music to SLD children.

THE MUSICAL CHARACTERISTICS OF MILDLY AND MODERATELY RETARDED CHILDREN

by Kenneth Bruscia

...reviews and applies information gained from research to recommend appropriate music experiences for mentally retarded students; attends issues of class placement, learning environment, curriculum development and classroom procedures.

MUSIC AND THE PHYSICALLY DISABLED CHILD

by Gwenn Snyder Karr

...guides the reader to a basic understanding of various conditions of orthopedic impairment and chronic illness, with suggested adaptations for involving the physically disabled in music activities.

THE EMOTIONALLY DISTURBED CHILD AND MUSIC

by Peter Simpkins

...discusses implications for the use of music in promoting the growth and learning of emotionally disturbed students with particular emphasis on those who are severely involved; addresses perceptual, motor, social and other characteristics.

OPPORTUNITIES FOR GROWTH: MUSIC IN THE EDUCATION OF SENSORY IMPAIRED STUDENTS

by Mary Taylor Ditson

...discusses special characteristics, capabilities, and needs of visually impaired/blind and hearing impaired/deaf children within the framework of designing appropriate music experiences and programs.

MUSIC: AN INTEGRATIVE APPROACH TO LEARNING FOR THE SEVERELY AND PROFOUNDLY RETARDED

PHYLLIS BOONE

PHYLLIS BOONE, R.M.T., has been employed by the Pennhurst Center for 13 years. Six of those years were spent under the supervision of the Chester County Intermediate Unit. Recently, after spending 3 years at The Liberty Forge School, where Pennhurst clients receive their education provided by Intermediate Unit 24, Ms. Boone returned to Pennhurst to work with adult clients. In addition to being registered as a music therapist, Ms. Boone teaches music therapy courses at Immaculata College and is certified in both music education and special education.

Severely and profoundly retarded children's responses to music indicate that they are perceiving more auditorily than may be apparent through traditional methods of testing and observation.

A hyper or distorted perception of auditory stimuli may cause some children to be frightened by some music, in which case a multi-sensory approach will be helpful.

Body rocking is a gross motor response to music that may be developmentally appropriate for the mental age of the child.

Profoundly retarded children's musical expressions are very personal and important for their future development. They need to be fostered, educated, and understood. In this article, several specific characteristics of the severely and profoundly retarded child's response to music will be explored and described. Following this, recommendations will be offered for teachers who are developing music programs for profoundly retarded students.

PERCEPTUAL CHARACTERISTICS

Although the profoundly retarded child may appear to perceive only the very obvious elements of music such as a strong rhythm or loud volume, subtleties in mode and harmony may also produce changes in behavior. Some children respond best to minor music or triple meter (waltz tempo), which would indicate that they are perceiving more auditorily than may be apparent through traditional methods of testing and observing.

Some children may be frightened as a result of stimulation from some music. This may be caused by a hyper or distorted perception of auditory stimuli. These children are not able to integrate sensory input and will frequently exhibit behaviors that may be interpreted as a defense. These behaviors could be holding the ears, intense body rocking that appears not to be a reaction of pleasure, and increased spasticity or stereotypic behavior patterns. This may be caused by loud rhythmic music or the addition of lyrics to a selection that otherwise causes no adverse effects. When it is apparent that the child's perception is distorted or when the child over-or-under reacts, a multi-sensory approach is usually most successful. When more than one avenue to the brain is used in an organized manner, the child more frequently will be able to integrate and interpret those sensory messages. Severely and profoundly retarded children will often show us these needs by smelling, touching and tasting the objects presented to them.

Since perceptual motor skills are usually not developed in these children, they may have difficulty manipulating instruments. Since a drum beater can be an additional problem for the child, using the hand to play drums and tambourines is usually more successful. They will also have difficulty with triangles since they move and the child has difficulty visually tracking the instrument. There are many adaptations that can be made in order to facilitate instrumental expression and they will be discussed in another section.

MOTOR CHARACTERISTICS

Body rocking is the most obvious motor characteristic of the profoundly retarded child. This may be a direct reaction to music or may only be intensified by the introduction of music. What is significant is that it is a gross motor response and may be developmentally appropriate for the mental age of the child. It also may be a pensive and very rhythmic movement.

Many times the motor characteristics of these children are classified stereotypic behaviors which are also frequently affected by music and can be very indicative of an affectual response to certain types and qualities of music. If the behaviors intensify and increase, it could be that the music is not the best for that child or possibly too many demands are accompanying that particular activity.

For the multiply handicapped child who may also have cerebral palsy, the startle reflex and increased spasticity will also be very evident with certain types of music. These are certain motor patterns that are a result of the activity level in the brain in response to the auditory stimuli. They are uncontrolled motor patterns that will interfere with the activity or task at hand.

COGNITIVE CHARACTERISTICS

Since these children are primarily functioning in the sensori-motor stage of development, there are only a few cognitive issues that should be considered.

These children may not be aware that their movements create the sounds made by instruments they are playing.

Before body image and self identity can be established, the severely/profoundly retarded child must have some understanding of cause-effect relationships.

Cause/effect relationships can be the area of concentration here. When severely and profoundly retarded children vocalize or play instruments, they frequently are unaware that the sounds are the results of their actions. Although music often will stimulate more vocalizing or motor activity, there is little relationship between the music and the vocalizations or actions of the child. If the arms are moving when music is being played and bells are placed on the child's hands, the bells will ring but the child probably will not be aware that his/her movement created that sound. If he/she begins to vocalize, he/she will not be aware of his/her contribution to the sound that is being heard. The response to music is present but there is no cognition of music making as a deliberate act. This is an important area of development for the severely/profoundly retarded child before body image and self identity can be established.

Object permanence is also usually lacking and can be dealt with through the use of music instruments. Once the source of sound is known, the next step is to remove the source from the visual field. The sound making object still exists; it can be heard. The recognition of this object permanence is important as it expands the working environment and stimulates curiosity, especially if the sound is pleasing to the child.

EXPRESSIVE/AFFECTIVE CHARACTERISTICS

Simple rhythmic patterns with the body or short, repetitious melodic vocalizations are expressions in compensation for the lack of language and should be treated as such.

Language is usually not well developed in this child, so the need to express and communicate is very strong. Because these expressions are usually nonverbal, they can easily be channeled into music or will already appear in the form of music. It may be only a simple rhythmic pattern with the body or a melodic vocalization that will frequently be short and repetitious, but these expressions are compensation for the lack of language and should be treated as such. The child may be expressing frustration or anger which is a message that teachers cannot afford to miss. If the child is given the opportunity to express these feelings musically, behavior problems will frequently decrease or be circumvented.

SOCIAL CHARACTERISTICS

Children will frequently begin to initiate musical interactions before they are able to make eye contact or initiate verbal interactions.

Socially, this child is usually extremely underdeveloped, and until self identity and body image are established, socialization takes the form of splinter skills. Most interactions are not initiated by the child, but rather are in response to a teacher or an adult. The child will frequently begin to initiate a musical interaction before he/she is able to make eye contact or initiate any verbal interactions with adults or peers. He/she may begin to play a drum, then stop and pause, and begin again. This pause can be used by the teacher to play a response or imitation of the child's pattern that could lead to a reciprocation that could develop into a meaningful social interaction.

IMPLICATIONS FOR MUSIC

VOCAL Although lyrics are very difficult for these children, melody will frequently be a part of their vocalizations. It may be segments of familiar songs or imitations of speech intonations or parts of television commercials that become their vocal repertoire. In isolation, it is difficult to identify the source of these vocalizations, but once this is accomplished it can be used as a valuable vehicle to foster interaction and verbal skills. Even if conversational speech is an

unrealistic goal for some children, some kind of verbal communication will inevitably relieve frustration for the children who are having difficulty being understood. If verbal imitation has not been achieved, the speech therapist may not accept the student. If melodic vocalizations can be first imitated by the teacher, identified by source, then expanded so that the child may eventually begin to imitate new variations on his/her own vocalization, the first step has been taken toward verbal communication.

INSTRUMENTAL Many children do not enjoy vocalization, but need to communicate and learn their options for self-expression. They will probably be inclined to use instruments, but only after they are aware of the result of their actions upon a given instrument. This is difficult to achieve if several instruments are being played at the same time. If the music teacher waits for a response, then begins again, an association of sound to body action is established.

If the children are multiply handicapped, some adaptations may be necessary in order to facilitate this process. Clinically Adapted Instruments for the Multiply Handicapped, by Clark and Chadwick, will supply some ideas and specific instruments of the logistics of each adaptation recommended.

RHYTHMIC/MOVEMENT Much movement seen at this level of retardation is classified stereotypic because of the repetitious quality and intensity. A good body scheme has not been developed, so children need to hear the names of body parts he/she is moving and the descriptive name of the movement. This is easily achieved by adding appropriate lyrics to a simple melody, i.e., this will provide more meaning to the kinesthetic experience and hopefully begin to improve receptive language and body image.

RECOMMENDATIONS FOR TEACHERS

Since severely and profoundly retarded individuals are unable to explain their needs verbally, their expressions will take the form of behaviors. Behaviors that are observable, although sometimes complex, can be channeled, interpreted and shaped. If a child's vocalizations are disruptive to the classroom, spend some time listening to them, not just to extinguish them as undesirable behaviors, but as a possible expression that could be creative, musical and usable as a teaching tool.

If instruments are used, be sure they are responsive to the child. An instrument that produces an undesirable or flat sound will not be expressive. It is important that the child experience this option for expression and interaction as easily and successfully as possible, even if the methods are not conventional teaching techniques for that particular instrument.

If possible, use lyrics that are appropriate to the task. If the child is playing a drum, it is important that he/she hears descriptions of what he/she is doing, i.e., "You hit the drum, you shake the bell. . . ." This will contribute to the cause/effect relationship that is so crucial to further development.

Finally, never stifle spontaneity. It is the revelation of a complex human being, who like the rest of us, is attempting to express, communicate and learn. With inhibition comes dishonesty and fear, which are undesirable elements that will hinder the learning process.

Even if conversational speech is an unrealistic goal for some severely/profoundly retarded children, some kind of verbal, vocal, or instrumental communication will inevitably relieve their frustration at not being understood.

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MUSIC AND THE CHILD WITH SPECIFIC LEARNING DISABILITIES

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Learning disabilities may be mislabeled by adults or hidden by the students.

Success in music has the potential to aid academic and social development and enhance self-esteem.

Perceptual-motor learning problems, common among SLD children, may cause frustration with some aspects of musical learning.

Children with specific learning disabilities (SLD) are the most likely to escape us. Because their learning problems are specific rather than general, the origin and nature of the learning difficulties may go mislabeled as lazy, unmotivated or hyperactive rather than as the correct pinpointing of the child's specific learning disorder. If the child is creative or above average intellectually, he/she may have learned to accommodate to or compensate for the learning problem so that it is even less obvious, though plaguing to the child and his/her learning progress.

Adamson and Adamson (1979) remind us of the three operational requirements for diagnosing a child as learning disabled. The child must show normal intelligence and an absence of other primary handicapping conditions and display a deficit in academic achievement when compared to his/her measured potential. Public Law 94-142 indicates that:

Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing or motor handicaps, of mental retardation, or of environmental, cultural or economic disadvantage. (Federal Register, 1977)

Because the SLD child's problems are specific, he/she might excel in music. It might be that such a child has musical sensitivity and could perform instrumentally or vocally within the normal class, lesson or rehearsal framework. Such success would be a source of academic and social strength and an aid to self-esteem. Recent cerebral specialization research appears to support the theories that specific learning disabilities may or may not affect musicality and musical learning (Regelski, 1978).

Conversely, despite a desire to participate in music, as in other areas, the learning disabled student can be overwhelmed and frustrated by music both as a stimulus and as a process. Depending upon the learning deficit, the music may be hard to comprehend and integrate perceptually, motorically, cognitively or affectively.

PERCEPTUAL-MOTOR SKILLS

Perceptual-motor learning problems are frequent among SLD children with poor gross and fine motor coordination, hyperactivity or hypoactivity and awkwardness being quite common (Myers & Hammill, 1976). Visual and auditory perceptual difficulties show up in the inability to discriminate forms, letters, sounds, and numerals. Haptic perceptual deficits present themselves in incorrect processing of tactile information.

Such deficits can frustrate musical learning by making the reading of notes, lyrics or rhythmic markings difficult. The student with auditory processing weaknesses may have pitch discrimination and dynamics difficulties or a weak auditory memory when learning music. Poor eye-hand coordination may complicate rhythmic accompaniment or the accurate rhythmic manipulation of keys or valves.

COGNITIVE SKILLS

The cognitive strengths and weaknesses of the SLD student vary with the individual. There is usually a preferred cognitive mode for each student which the teacher must discover and use. Short and long-term memory deficits are common as are speech and language disorders. These weaknesses are revealed in music in the student's inability to remember song phrases or lyrics between rehearsals. Vocally, speech disorders can make it hard to articulate song lyrics. Directions may be ignored or misconstrued because of language problems.

AFFECTIVE AND SOCIAL SKILLS

The affective and social behaviors of the SLD child are frequently reported and discussed. The "invisibility" of learning deficits combined with the embarrassment of poor coordination, confusion, memory deficits and special instruction have a profound effect on the feelings and actions of these students. Resulting behavior choices span from being withdrawn to being hyperactive. Common behaviors include clowning, showing-off, and daydreaming or distractibility. Integrating feelings with actions is difficult so the student appears at dual purposes with him/herself. Such behaviors can make it difficult for the SLD child to be part of an ensemble. Clowning can make it hard for the teacher to maintain order in the classroom and daydreaming can cause the child to miss directions and cues so that the teacher must repeat them or the student must fall behind.

IMPLICATIONS FOR MUSIC

The techniques for involving SLD students in music are basically ones of adaptation. Many of the musical activities used in schools involve several perceptual and cognitive modes and adaptation may be as simple as capitalizing upon and maximizing the channels used to carry information.

Vocal skills can be strengthened by working with a speech therapist and the student on vocalizations and lyric pronunciation. Songs and lyrics can be put on cassette tape for the students to listen to on their own at other times during the school day or at home. Similarly, copies of songs and instrumental pieces can be made available to strengthen the visual learning mode. The pairing of motor cues, such as the Kodaly concepts or just the raising and lowering of an arm with pitch changes can stimulate motoric learning.

These same ideas can be applied instrumentally. Auditory tapes of instrumental exercises or parts can be made available as well as copies of the music. Placing the SLD student next to a strong player (or singer) can be supportive and provide a correct performance that the SLD child can imitate.

One of the strengths of music is its ability to carry nonmusical information—the best example of this being advertisement jingles. The SLD student who retains musical phrases and structures well or who derives much enjoyment from music can use music as a learning strength. Colors, numbers, letters, multiplication tables, directions or classroom transitions can be learned and cued by putting the information into a familiar or original melodic framework. The order that music's structure provides through rhythm can help organize thoughts and actions.

Another of music's strengths lies in its ability to stimulate and mobilize feelings. Original or appropriate familiar songs can help the student understand and express the feelings and thoughts he/she has about his/her learning problems while providing the safe structure of a beginning and end and the constancy of the rhythmic structure. Whether the content is fact or feeling, music can be part of any section of the school day. Music can be combined with many other techniques as a teaching device that offers enjoyment, strengthens memory, and provides an alternative learning mode.

RECOMMENDATIONS TO THE TEACHER

Teachers who work with SLD students must learn to think in multiple modes

Each SLD student usually has a preferred cognitive learning mode which can be utilized to make music experiences more meaningful.

Having average or above average intelligence, these students often recognize their deficits and are embarrassed by them—the result may be inappropriate or even disruptive behavior.

To promote musical learning, adapt experiences to minimize weaknesses and maximize strengths.

Music experiences can be structured to carry nonmusical information, such as colors, numbers, letters, multiplication tables and directions, or to stimulate and mobilize feelings.

Slowing the teaching process does not help the SLD child. Patience, acceptance, and adaptations such as teaching in segments are better routes to success.

when planning lessons. They should try to address projects and activities to as many sensory learning channels as possible. Slowing the teaching process will not aid the SLD student but the specific directing of information to the student's learning strengths will.

Also important is the task-analyzing of lesson plans and music activities so that the teacher can help the student learn sequentially and logically. Learning in segments is extremely helpful to the SLD student and the student can eventually learn to break down information for him/herself.

Perhaps most importantly, the teacher must exercise real patience. The SLD child often appears so "normal" that it is easy to forget that these students have legitimate learning disorders. Try to let these students know early that you will not embarrass them but will work with them to facilitate their learning. Although the music specialist is carefully trained for teaching or treatment, the special educator should not be inhibited in using music resources they are comfortable with in their curriculum.

As with other handicapped students, SLD children are not necessarily handicapped in music. Therefore, their involvement can make social and intellectual differences less obvious and perhaps, less important.

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THE MUSICAL CHARACTERISTICS OF MILDLY AND MODERATELY RETARDED CHILDREN

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Bringing the joys and benefits of music to retarded children is essentially a process of exploring and developing the musical potential that lies within each child.

Research provides some guidance to teachers by pointing out what is important to consider in observing musical behavior and by suggesting ways to help retarded children overcome obstacles in attaining their musical potentials.

A number of standardized tests, particularly when modified, are useful in studying the musical aptitude and achievement of retarded children.

Although there are isolated cases of unusual musical talents among retarded children, they generally obtain lower total scores on music aptitude tests than nonretarded children of the same chronological age.

Bringing the joys and benefits of music to children—be they mentally retarded, average, or gifted—is essentially a process of exploring and developing the musical potential that lies within each child. The purpose of this paper is to provide information that will assist the reader in exploring and developing the musical potential of mildly and moderately retarded children (i.e., those within the IQ range of 40 to 69 on the Wechsler scales).

In working with mentally retarded children, three questions seem to continually bedevil the music teacher: What are the musical capabilities of retarded children, and particularly in comparison to average children? What psychological factors influence how retarded children perceive, produce, and respond to music? And, how do I develop an approach to accommodate their special needs? Because answers to these questions inevitably vary from child to child and situation to situation, we must rely heavily upon our own observations and experience. However, given the complexities inherent in both mental retardation and musical development, we frequently need guidance in knowing what to observe and how to observe it, as well as some validation of our own interpretations and conclusions. Research can provide at least some of the guidance and validation needed, not only by pointing out what is important to consider in observing musical behavior, but also by suggesting ways to help retarded children overcome obstacles in attaining their musical potentials. The present paper is therefore a review of research findings on the musical capabilities of retarded children and on psychological factors which may influence these capabilities, followed by a list of practical implications for music programming.

MUSICAL APTITUDE AND ACHIEVEMENT

A number of standardized tests have proven useful in studying the musical aptitude and achievement of retarded children. (See Appendix A.) In administering such tests to retarded children, investigators have found that various modifications may be necessary (McLeish & Higgs, 1967; Bixler, 1968; Ianocone, 1977), including: slower presentation of items, shorter testing periods, more testing sessions, smaller testing groups, elimination of certain sub-tests, simplification of test instructions, longer pre-test practice periods, audio-visual aids, and simplification of answer sheet formats.

Research has shown that, although isolated cases of unusual musical talents are sometimes found in this population (see Shuter, 1968), retarded children generally obtain lower total scores on music aptitude tests than nonretarded children of the same chronological age (McLeish & Higgs, 1967; Ianocone, 1977; Diggs, 1965; Lummls, 1967; Chase, 1931). Since retarded and nonretarded children of the same chronological age (CA) differ essentially in intelligence and/or intellectual development, the results of these studies suggest that the lower musical aptitude of retarded children is probably a function of either their lower intelligence (IQ) or mental age (MA). Further support for this contention can be found in correlational studies involving retarded subjects. Positive and significant correlations have been found between the musical aptitude of retarded children and IQ (Kurihara, 1973), scores on the Illinois Test of Psycholinguistic Abilities (Bixler, 1968) and MA (McLeish & Higgs, 1967; Kurihara, 1973); while low and insignificant correlations have been found between musical aptitude and CA. It is also interesting to note that correlations of musical

aptitude with IQ and MA are usually higher among retarded subjects than among nonretarded subjects, while correlations with CA are usually lower among retarded subjects (Kurihara, 1973).

Differences in musical aptitude between retarded and nonretarded children may also be a function of certain test variables. McLeish and Higgs (1967) found that when the test is especially designed for younger children, score differences between the groups tend to be smaller. They also found that retarded children were equal to or better than their nonretarded peers on those subtests involving "simple perception," but on "those tests where musical memory is involved, or where a judgment which involves a discrimination more complex than a simple psychophysical choice has to be made," the mean scores of the retarded group dropped significantly (p. 7).

Musical aptitude also varies among retarded children. Ianocone (1977) found that retarded children with higher MAs obtain higher musical aptitude scores than those with lower MAs. Diggs (1965) found that in certain areas of both musical aptitude and achievement, non-institutionalized retarded children are superior to their institutionalized peers. Kurihara (1973) observed that correlations of musical aptitude with IQ and MA found in brain-injured retarded children were different from those found in non-brain-injured retarded children.

The studies reviewed so far have dealt primarily with the general musical aptitude of retarded children as measured by standardized tests. Several other studies can be found which examine discrete areas of musical ability using specially designed experimental tasks that involve aptitude and/or achievement. (See Appendix B.) The results of these studies also show that retarded children are generally inferior to nonretarded children of the same CA and equal or superior to their MA peers. Musical ability apparently varies among retarded children according to both IQ and CA. In other words, MA (which is IQ multiplied by CA and divided by 100) is a good predictor of variations in musical ability among retarded children.

Questions of how retarded children compare to other children in musical ability have little meaning unless the differences found can be explained. As Baumeister (1968) points out, merely finding differences "does nothing more than attest to the reliability of the original diagnosis that individuals in the retarded group are, in fact, more or less mentally retarded" (p. 870). In order to understand the musical aptitude and behaviors of retarded children, a variety of psychological factors must be considered. Of particular concern are those psychological processes involved in musical reception and expression which are problematic for retarded children. The next four sections of the paper deal with those psychological factors which affect their musical perception, musical cognition, motor performance, and motivation.

PERCEPTUAL CHARACTERISTICS

Musical perception is broadly defined as the ability to compare tones or tone sequences along the dimensions of pitch (high/low), intensity (loud/soft), duration (long/short), and timbre (tone quality). It is a pre-requisite for all forms of musical response and is therefore involved in every standardized aptitude or achievement test as well as every laboratory or classroom task. The ability of retarded children to perceive music is influenced by at least three major factors: attentional problems, response modality, and diagnostic variables.

The most basic attentional requirement of music perception is attending to the music rather than to extraneous stimuli in the environment (Shuter, 1968). Retarded children often have difficulty controlling their attention, even when highly motivated. Frequently it appears that either they are unable to resist attending to task-irrelevant stimuli (Denny, 1966), or that their attention is passively and continuously shifting from one thing to another (Goldstein, 1943), or that they try to attend to too many things at once (Zigler, 1966). In either case, retarded children are not always able to attend to task stimuli for the length of time needed to make perceptual comparisons. Thus their seemingly poor performance on music perception tasks is frequently not a matter of perceptual inadequacies as much as it is an attentional control problem.

Music perception frequently requires "selective attention," or an ability to direct one's attention to only certain aspects of the musical stimulus (Shuter,

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1968). For example, selective attention is needed when comparing two successive melodies only in regard to rhythm or when focusing on one of two simultaneous melodies. When presented with such a task, mentally retarded children frequently have difficulty identifying which element of the stimulus is relevant to the task and then selectively attending to only that element (Zeaman, 1973). So far, research has shown that this selective attention problem has a detrimental effect on their ability to discriminate timbres of different musical instruments (Van Oudenhoven & Van Der Aart, 1968) and on their ability to recall rhythm patterns (Bruscia, 1981); however, it can also be observed in other musical situations. For example, when presented with two tones which are different in pitch but equal in duration and asked to compare them only in regard to pitch, a retarded child may answer "same," not because he did not perceive a pitch difference but because he was listening to the duration of the tones instead. Conversely, when asked to compare the duration of these tones, a retarded child may answer "different" simply because he/she was attending to the pitch instead. Needless to say, when the task continuously shifts what is relevant from one dimension to another, retarded children have difficulty shifting their attentional set accordingly (Zeaman, 1973). It is important to note that when given the appropriate training, the selective attention abilities of retarded children can be improved, and transferred to other modalities (Van Oudenhoven & Van Der Aart, 1968).

The third type of attentional problem which interferes with the perceptual performance of retarded children occurs when the task requires "breadth of attention," or the ability to simultaneously attend to more than one element of a musical stimulus (e.g., duration, number, and speed of a rhythm pattern) or to more than one musical stimulus (e.g., two simultaneous rhythm patterns). The author has often observed that when asked to imitate a rhythm pattern such as (), a moderately retarded child may clap (). At first this response appears to be incorrect, however upon further exploration, one finds that the child was accurate in reproducing the correct number of tones and was simply not listening to durational and speed aspects of the pattern as well. The same kind of problem occurs when more than one melody or rhythm are presented together and the task requires attention to both.

Variability in the perceptual performance of retarded children can often be attributed to the type of response required by the task. Music perception tasks typically require either a spoken or written verbal response (e.g., same or different), or a musical/motor response (e.g., tapping back a rhythm). Both types of response warrant special considerations with regard to retarded children. Verbal responses must be considered in terms of the child's language development as well as his word usage. More specifically, the child must understand the concept "same/different" and use these verbal labels with the precision of meaning used by the teacher. Another consideration is that some retarded children may answer perseveratively (i.e., repeat one answer aimlessly regardless of the item presented) or answer according to feedback on the preceding item (i.e., if "same" is the correct answer for the preceding item, it is regarded as the correct response for the next item as well). On the other hand, when musical responses are required by the task, the child's motor development and vocal or instrumental capabilities must be taken into account. Needless to say, if the child is motorically unable to sing or play the correct response, no conclusions can be drawn in regard to his perceptual abilities.

Diagnostic variables are also important to consider in determining the perceptual capabilities of retarded children. A primary concern is whether the child has an organic impairment which affects perceptual motor functions. For example, some retarded children have specific learning disabilities (e.g., auditory perceptual impairments due to brain damage or motor apraxia) which may interfere grossly with music perception tasks, and particularly those requiring auditory figure-ground discrimination, auditory sequencing, and motor planning. Also, hearing impairments are not uncommon among retarded children, and unfortunately are often undetected.

COGNITIVE CHARACTERISTICS

In order to acquire a musical concept, the child must operate in some way on

Music perception often requires attention to only certain aspects of a musical stimulus—mentally retarded children frequently have difficulty identifying which element of the stimulus is relevant to the task and in attending only that element.

Another prevalent area of difficulty is in simultaneously attending to more than one element of a musical stimulus, or to more than one musical stimulus.

The type of response (spoken, written, musical/motor) required by the tasks influences perceptual performance.

In order to acquire a musical concept, the child must operate in some way on what is perceived, then abstract the idea or principle underlying the percepts—a very difficult task for mentally retarded children.

Short-term memory deficits negatively affect musical cognition. Teachers can promote growth in memory skills by assisting the child in organizing the information and by utilizing appropriate rehearsal strategies.

Once a concept is acquired, retarded children seem to have no difficulty retaining it over long periods of time.

Research provides little information about retarded children's motor characteristics, particularly in areas applicable to musical performance; however, there appears to be a relationship between levels of motor competence and mental ability.

what he/she perceives (e.g., analyze, classify, organize, synthesize, code, and label) and then abstract the idea or principle underlying the percepts, utilizing previous knowledge of similar events. Since mental retardation is characterized by deficiencies in cognitive or intellectual operations, it is in these areas of musical functioning that mentally retarded children will have the greatest difficulty.

Research has shown that many of the cognitive inadequacies of retarded children can be attributed to a failure to devise, adopt, and use strategies (Brown, 1974). The first strategy which is necessary for musical cognition is "input organization" or the process of analyzing, organizing, and grouping percepts into meaningful units. A characteristic feature of mentally retarded individuals is that they do not spontaneously "operate" on what they perceive and thereby transform perceptual inputs into "chunks" (Spitz, 1966). In a music situation, this is evidenced by a failure to recognize musical groupings, patterns, and repetitions. For example, when retarded children are presented with a pattern such as (♪♪♪♪), they do not automatically conceive it as only one motif (♪♪) which is repeated twice. This failure to group or chunk percepts has deleterious effects not only on their ability to abstract the idea or principle which organizes the percepts, but also on their ability to remember the percepts themselves. Needless to say, if percepts are not remembered they cannot be molded into concepts. This brings us to another strategy-related problem which influences musical cognition, namely short-term memory.

Although retarded children are comparable in short-term memory to nonretarded children of the same MA, they are generally found to be inferior to nonretarded children of the same CA, both in memory span and accuracy (Spitz, 1973). While inadequacies in input organization strategies are partially responsible for this inferiority, failure to adopt and use rehearsal strategies are also implicated. Ellis (1970) found that retarded individuals are inferior in short-term memory on those aspects of the task requiring rehearsal strategies. Specifically, when presented with a lengthy sequence of digits, the retarded group was equal to their nonretarded peers in recalling final segments of the sequence but inferior in recalling initial segments. Rehearsal mechanisms are implicated because in order to recall both segments, one must rehearse the initial segment while registering the incoming or final segment. When applied to a musical memory task, this research suggests that when presented with a lengthy melody or rhythm, retarded individuals will have a greater tendency to forget the initial segment because of a rehearsal deficit.

The spontaneous use of input organization and rehearsal strategies, and short-term memory skills are particularly important in the acquisition stage of concept learning (Gagne, 1970), and it is in this stage that retarded children have the most difficulty (Clarke, 1975). However, once a concept has been acquired, retarded children seem to have no difficulty retaining it over long periods. That is, their long-term retention of previously well-learned concepts is relatively unimpaired or equal to that of their average peers (Clarke, 1975). This explains a rather frequent observation of teachers that once retarded children learn a song, they never seem to forget it!

MOTOR CHARACTERISTICS

In comparison to the information available on perceptual and cognitive characteristics of retarded children, relatively little is known about their motor characteristics, particularly in areas applicable to musical performance. We do know that when compared to children of the same CA and sex, retarded children demonstrate less motor competence in tasks requiring precision, quick reactions, and coordination (Malpass, 1963). Also, there is a relationship between levels of motor competence and mental ability (Malpass, 1963). As for developmental comparisons, the Manual on Terminology and Classification in Mental Retardation (Grossman, 1973) places moderately retarded children approximately three years behind mildly retarded children in physical and motor development, and mildly retarded children about the same distance behind their nonretarded peers. Although this three year formula is a rather gross method of prediction, it can be very helpful in estimating the motor abilities of retarded children in musical situations.

Hardly any research has been done on the musical-motor functions of retarded children. In fact, the author has found no studies dealing with instrumental proficiency, and only two dealing with vocal competence. Fortunately, the results of these two studies provide very useful information. Larson (1977) found that retarded children in the educable range have significantly smaller singing ranges and significantly lower mid-points in comparison to their nonretarded CA peers, as well as in comparison to ranges and midpoints found in songbooks designed for retarded children. The average singing range of retarded children was found to be 10 half steps smaller and 4 half steps lower than their peers. Dileo (1976) found that the size of singing ranges in retarded children is positively and significantly correlated to IQ, sex, race, adaptive behavior, and language level, depending upon whether the range was determined through pitch-matching or actual singing. The mid-points of the singing ranges were correlated most highly with sex and age.

AFFECTIVE AND INTERACTIONAL CHARACTERISTICS

In working with retarded children, we often become so concerned with what we want them to learn and how we should go about teaching it, that we overlook one of the most basic and important considerations—how children feel and react within a musical situation. The child's perspective is relatively simple. He/she is primarily concerned with three things: Is it any fun? Can I do it? and, How will my teacher respond? Researchers have attempted to understand how these concerns affect the learning of retarded children by examining their musical preferences, reactions to failure, and relationships with adults.

Research on the musical preferences of retarded individuals has shown that they prefer: music over noise or silence (Cotter and Toombs, 1965; Steele, 1967), vocal music over strictly instrumental music (Koh & Koh, 1966), rhythmic music over less rhythmic music (Cotter & Toombs, 1966), and children's music over adult background music or electronic music (Cotter & Toombs, 1966). When compared to nonretarded individuals, retarded individuals exhibit similar preference profiles but show less uncertainty and variability in their preferences (Koh & Koh, 1966). Also, there is evidence which suggests that their preferential responses tend to be more extreme. Koh & Koh (1966) found that retarded persons have a tendency to rate music as either most unpleasant or most pleasant more often than nonretarded persons do.

Because failure is not an uncommon experience for them, retarded children typically develop affective reaction patterns which eventually begin to dampen their motivation and impede their learning. Research on how failures affect retarded persons has shown that they are characterized by a generalized expectancy to fail (Cromwell, 1963). Because of this expectancy, failure experiences do not "move" them as much as their nonretarded peers, at least visibly. Nor do failure experiences induce retarded children to try harder (Cromwell, 1963). This passivity and lack of persistence in learning situations has been explained in terms of an unwillingness to risk success and an even greater tendency to avoid further failure (Cromwell, 1963). As one might expect, novel situations (which are fraught with possibilities of failure) tend to make retarded children perform below their capabilities (Cromwell, 1963), at least until their anxiety diminishes. Another problem resulting from repeated failure is that retarded children tend to be outer-directed rather than inner-directed in their problem-solving (Zigler, 1966). Essentially this means that instead of trusting their own efforts and relying upon their own judgment in solving problems, they continually seek cues, guidance, and solutions from others.

One of the most potent elements of any learning situation is the inter-personal relationship between the teacher and student. For the retarded child who is already so outer-directed, and who in many cases has been deprived of adult contact and approval, this relationship is particularly important. Research has shown that socially deprived retarded children tend to seek adult contact and approval more than nonretarded children do (Zigler, 1966). Consequently they have a greater tendency to react positively to adults and unfortunately, because of more frequent negative encounters, they also have a greater tendency to react negatively. With respect to music, Steele (1967) found that adult approval can significantly alter the overt preferential responses to music of

Teachers should not overlook one of the most basic and important considerations—how children feel and react within a musical situation.

Retarded individuals usually have strong preferences in music.

Experiencing failure does not induce retarded children to try harder. It may even cause them to be unwilling to risk success.

Socially deprived retarded children tend to seek adult contact and approval more than nonretarded children do.

retarded children, and that when the adult is absent retarded children will revert to their own preferences. She also found that retarded children tend to spend less time producing music when an adult is present.

PRACTICAL IMPLICATIONS

The research findings which have been reviewed are rich with practical implications for designing and implementing classroom music programs. What is particularly interesting is that when taken in isolation, each finding seems like only a small piece of a large jigsaw puzzle, but when compared and related, the pieces begin to fit together into an emerging picture. This is particularly noticeable when, as in the following sections of this paper, the research findings are synthesized according to practical issues and topics. For the sake of brevity, individual research findings have not been reiterated each time they were implicated in the recommendation. Nevertheless, all of the recommendations are based upon issues identified in the research literature.

Appropriate placement in music class is crucial to success.

CLASS PLACEMENT. The research literature clearly indicates that because mentally retarded children lag behind their nonretarded peers and differ among themselves in musical ability, and because their reactions to situations with a high risk of failure are so detrimental to learning, musical ability should serve as the primary criterion for placing retarded children in music classes. Under no circumstances should class placement be dictated by scheduling considerations or by misguided efforts to comply with laws governing the education of handicapped children. The intent of these laws is to improve their educational opportunities in all curricular areas, not to mandate programmed failure in some.

This does not imply that retarded children should never be mainstreamed into regular music classes. In some instances they should be, in others they should not be. Again, research provides very clear guidelines for making this decision: (1) Existing standardized music tests, when modified appropriately, can be used to identify levels of musical potential, and thereby can provide a basis for class placement. (2) If testing is not possible or desirable, use MA as the criterion for grouping retarded with nonretarded children. Since the retarded children will be older chronologically, care must be taken to insure that they are on similar levels of physical and social development as well. (3) When grouping mildly retarded with moderately retarded children, use MA also. (4) When grouping retarded children on the same IQ level (e.g., all mildly retarded) use CA as the criterion.

LEARNING ENVIRONMENT. Because retarded children are easily distracted, teachers must carefully engineer the learning environment so that it (1) increases the likelihood that children will pay attention and (2) decreases the likelihood that they will be distracted. It is important to realize that both of these conditions must be met. In order to create these conditions, the teacher should start by evaluating the "attentional salience" of elements in the environment. Try sitting in various places in the room where children sit, then look around, listen, and take stock of your physical comfort. You will be surprised how much your own mind will wander! Next, establish a focal point in the room or a "center of attraction" by clustering attractive elements which are used in musical activities and removing from view any irrelevant or distracting elements. Now the most important step is to select a place in the room which is the center of attraction. Use this spot as your base of operations. This teaching base should allow you to be completely visible to all of the children and provide you with quick and easy physical access to each child. (Don't hide behind the piano!) The best seating arrangement for the children is to be in a semi-circle around your teaching base.

CURRICULUM DEVELOPMENT. When presented with the prospect of teaching retarded children for the first time, teachers sometimes become anxious. In many cases, the source of this anxiety is not the children themselves, but the risk of failing as a teacher, or the unsettling feeling of not knowing what to do. A common reaction to this anxiety is to expect either too little or too much from the children or from oneself. Since a curriculum is an outline of what a

Teachers must carefully engineer the learning environment so that it increases the likelihood that children will pay attention and decreases the likelihood that they will be distracted.

teacher expects children to learn in response to teaching efforts, attitudes and feelings that affect these expectations affect the curriculum as well. Two questions might be helpful in clarifying one's own attitudes and feelings: Do I have pre-conceived and/or inaccurate notions of what the capabilities of retarded children are? and, Do I have fixed and/or unrealistic notions on what aspects of the subject matter must be covered?

Most teachers would agree that the "ideal" curriculum is one that meets the learning interests and needs of children in a particular subject area in an efficient and rewarding way. Probably the most important thing to realize in teaching retarded children is that curriculum development is an ongoing process of observation, planning, evaluation, and adjustment. A curriculum should not be a permanent blueprint but a constantly emerging plan of short term objectives which lead to long term goals. The plan emerges according to how the children respond (short-term objectives) to learning sequences inherent in the subject matter (long-term goals).

Essential steps in the process of curriculum development are:

1. Estimate the children's general level of musical development prior to the first class. Since retarded children are musically comparable to average children of the same mental age, estimate their mental age (i.e., multiply IQ by CA and divide by 100), and consult existing music curricula to identify the general content area of music learning for that age level. Then prepare a few tasks on that level for use in the first class period. The design of each task should be flexible enough to allow for spontaneously increasing or decreasing its difficulty.

2. Use the first few class periods to gather specific information on the children's level of musical development. Carefully observe individual differences in the way the children respond in a music learning situation. According to research findings, individual differences may occur in musical areas (e.g., perceptual versus cognitive tasks, rhythmic versus melodic abilities, vocal ranges, instrumental motor proficiency), and in psychological areas (e.g., attentional skills, use of cognitive strategies, reactions to failure and adult approval). For planning purposes, identify sub-groups of children within the class who have similar individual differences.

3. Identify long-term goals which are consistent with the general level of musical development of the class. Then formulate specific learning objectives for sub-groups within the class. The key to formulating goals and objectives for children with individual differences is to find the common denominator. That is, look for those musical skills that all of the children have, then formulate objectives in each skill area which require different types or levels of success from each sub-group. In short, while all children work in the same goal area, each sub-group may have somewhat different short-term objectives or criteria for success. Information on how to write Individualized Education Programs (IEPs) can be found in Graham and Beers (1979).

4. Map out a logical sequence of goals and objectives. Gordon (1980) provides a wealth of information on how to sequence music learning.

MUSICAL MATERIALS AND ACTIVITIES. Once goals and objectives have been formulated and sequenced, the teacher is ready to select or design materials and activities to accomplish them. The key to success here is "combining business and pleasure." That is, musical materials and activities used in the classroom should provide children an efficient yet enjoyable way of learning.

Since, as research points out, retarded children are rather definite about their musical preferences yet easily distracted, the first consideration is whether the materials and activities will motivate the children to participate actively and continuously. Although research provides general clues on the kinds of music preferred by retarded children, the specific preferences of each age group or class must be determined by the teacher, particularly with regard to stylistic preferences (i.e., traditional versus rock). Retarded children often have the same musical preferences as the social group they emulate. Thus, how retarded

Curriculum development is an ongoing process of observation, planning, evaluation, and adjustment.

Musical materials and activities used in the classroom should provide children with an efficient yet enjoyable way of learning.

children perceive themselves socially can be a valuable clue to their musical preferences. As for selecting music within these preferences, music that has interesting melodies, rhythms, and harmonies, and a generous share of dissonance is most likely to command their attention. Music with bland melodies accompanied by the old "um-pah-pah" bass and standard chord progression is just as boring to them as it is to us! "Good" music is easy to find. The songbooks and materials of Nordoff and Robbins and the Levins (see Appendix C) are highly recommended. They are easy to play, masterfully designed for retarded children, and musically superb.

In addition to their motivational value, musical materials and activities should be selected on the basis of how their inherent musical qualities relate to the learning objectives. Since retarded children are not always able to selectively attend to that element of the music relevant to the task at hand, musical materials should be selected so that the task-relevant element is the most attractive or attentionally salient element. For example, if the learning objective is concerned with the perception of melodic rhythm, music having a very distinctive melodic rhythm and substantially less distinctive harmonic or accompaniment rhythms should be used. Or for example, if meter perception is the objective, the rhythm and phrasing of the melody should emphasize metric divisions and create no syncopations with the basic beat.

The final consideration in selecting or designing learning materials for retarded children is suggested by research on their reactions to failure—retarded children need to perceive that they can be successful in the learning situation. Although verbal support helps, it is not enough. The learning tasks must be designed so that the children perceive few risks of failure. This can be accomplished by building into the tasks two safety mechanisms. First, new materials or tasks should be introduced using previously learned skills, and conversely, new skills should be introduced using previously learned materials or tasks. This reduces the anxiety which usually develops in novel or new situations. For example, if the children already imitate rhythms, introduce a new song (which will eventually require melodic imitation) by first having them imitate the rhythm only. Or conversely, teach them melodic imitation using a previously learned song or task which involved only rhythm imitation. Second, in order to allow for individual differences in ability, the activity should be designed to allow for a variety of responses other than the target response. Or in other words, every activity should have several target responses. For example, if the task requires melodic imitation and certain children are not yet ready to learn this skill, the song and task should be musically flexible enough to permit them to give a response within their capability (e.g., playing an instrumental accompaniment while the other children sing back the melody). It is important for each child to feel that his/her role in making music is significant, unique, and indicative of his/her musical assets. In order to create this atmosphere, teachers must see themselves not as guardians of the sacred score but as orchestrators of a group musical effort. To summarize these two safeguards for success: always start where the children are, then build new skills.

CLASSROOM PROCEDURES. When an activity is presented in class, it signifies that the teacher has already made most of the critical teaching decisions, either wittingly or unwittingly. Previous discussions attest to the importance of pre-classroom planning. No matter how many nifty or clever classroom procedures we may have, the environment must be conducive to learning, the curriculum must be relevant to the children's needs, the goals and objectives must be clear and realistic, and the design of materials and activities must support efficient and enjoyable learning. This does not imply that classroom procedures are less important than planning. When regarded as ways of implementing a plan, they are extremely important. The following procedural considerations are particularly important when teaching retarded children:

1. Keep verbal instructions brief, simple and clear. Inasmuch as retarded children can be impulsive and distractible, they are rarely fond of long-winded explanations. The best rule of thumb is, if a task or activity requires more than sixty seconds of verbal instructions, simplify, restructure, or abandon the activity. Lengthy instructions are usually necessary either when the activity is too complicated or beyond the children's capability, or when the teacher is trying to

Retarded children particularly need to perceive that they can be successful in the learning situation.

Consider the students' strengths and weaknesses when designing procedures for implementing the music lesson.

accomplish too many things at once. Complex activities should be presented in gradual sequences with short periods of verbal instructions spaced evenly throughout. To keep instructions simple and clear: avoid long and complicated sentences; limit commands to two steps; and use words in the children's vocabulary.

2. Continually seek eye-contact with all of the children and encourage them to look at you.

3. Condition the children to establish a "performance set" before beginning to sing or play. Expect silence, eye-contact, and physical readiness prior to beginning any music-making task. Often it is helpful to use a manual sign to establish this attentional or performance set.

4. When presenting a musical example or exercise, always tell the children which element or part of the music is important to attend, and remind them to listen carefully.

5. Give the children listening and learning strategies as often as possible, and constantly remind them to use them. For example, when presenting a rhythm, tell them to listen for repeats or to try hard to remember the first part.

6. Control the number of objects used in any learning exercise, and always avoid using any superfluous equipment or gadgets which may distract the children.

7. When musical instruments are not in use, keep them out of sight and out of reach. Do not distribute instruments for a task until it is time to use them. Usually verbal instructions should precede the distribution of instruments.

8. Praise and encourage each child daily for something he/she has done well.

9. Finally, keep a sense of humor! When your plans and procedures seem to fail, a chuckle goes a long way. Look for all of the things you did successfully, and pat yourself on the back. Then go back tomorrow and enjoy the children, their music, and yourself!

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APPENDIX A

STANDARDIZED MUSIC TESTS USED WITH RETARDED CHILDREN

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APPENDIX B
RESEARCH ON SPECIFIC MUSICAL ABILITIES

Area	Task	Comparisons			References
		CA Normals	MA Normals	Among Retarded Children	
Duration Perception	Reproducing tones of varying durations	Inferior			Mulhern, Warm, & Clark, 1974; McNutt & Melvin, 1978 Holden, 1970
Numerosity Perception	(1) Enumerating pulses in a repeated series	Inferior	Inferior		
	(2) Reproducing mixed sets of two, three, and four pulses	Inferior	Equal		Pichot, 1949
Speed Perception	Distinguishing between two pulse speeds	Inferior			Cantor & Girardeau, 1959
Spontaneous Tempo	Tapping freely	Faster	Same		Pichot, 1949
Pulse Maintenance	Keeping a steady pulse	Equal			Kaplan, 1977; Pickett, 1949
			Sometimes Superior		Pichot, 1949
Pulse Synchronization	Tapping or moving in time to a metronome or music, even when tempo changes	Inferior	Equal		Pichot, 1949; Kaplan, 1977
				Mongoloids not superior to others	Blacketer-Simmonds, 1953
				Skill is more closely correlated to word discrimination than speech or pitch perception	Lunt, 1973
Meter Perception	Accenting beats ac- cording to the meter		Equal to same MA; Superior to lower MA		Kaplan, 1977
Rhythm Perception	Reporting whether two patterns are the same or different			Correlated to IQ, CA, and sex	Lienhard, 1976
Rhythm Synchronization	Tapping with the rhythm of a melody		Equal to same MA; Superior to lower MA		Kaplan, 1977
Rhythm Maintenance	Playing a rhythmic ostinato throughout a song		Equal to same MA; Superior to lower MA		Kaplan, 1977
Rhythm Imitation	Reproducing rhythms	Inferior	Equal Inferior		Pichot, 1949
					Kaplan, 1977
				Mildly retarded are superior to moderately retarded	Bruscia, 1981
				Mongoloids are not superior to others	Blacketer-Simmonds, 1953
Rhythm & Tempo Conservation	Recognizing rhythmic invariance under transformations of tempo, and vice-versa			More closely correlated to word discrimination than speech or pitch perception	Lunt 1973
				Developmentally disabled learn rhythm before tempo conservation	Rider, 1977
Rhythm Reading	Reading rhythm notation			Educable retarded children can learn to read rhythms	Baker, 1966
Melodic Memory	(1) Recalling short melodic sequences	(1) Inferior	(1) Equal		(1) Zenatti, 1975
	(2) Imitating short melodies	(2) Inferior	(2) Inferior		(2) Peters, 1970

APPENDIX C
RESOURCES AND MATERIALS

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MUSIC AND THE PHYSICALLY DISABLED CHILD

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GWENN SNYDER KARR is a graduate teaching assistant at the Ohio State University, working on a Master of Arts degree in music education, with an emphasis on teaching the handicapped, which will include certification in the area of learning disabilities. She served as a music educator and registered music therapist at the D. T. Watson Rehabilitation Hospital for Children, Sewickley, Pennsylvania. In this dual capacity, she taught music and eurhythmics to learning disabled and physically handicapped students of all ages and developmental levels. A videotape of her work with children at The Watson Home appeared on The Today Show.

Physical disabilities are medically involving and do not affect a child's intellectual functioning.

To accommodate physically disabled children in the music setting, one must adapt both the physical environment and the musical methods, materials and goals.

Physically disabled children must move in order to develop and maintain the functioning that they do have.

Physical disabilities which affect children can be divided into two groups: orthopedic impairments and chronic illness. Orthopedic impairments may be referred to as those conditions which inhibit or impair motor abilities. Examples of orthopedic handicaps found in children are cerebral palsy, muscular dystrophy, spina bifida, rheumatoid arthritis, skeletal deformities, amputations and paralysis or neurological impairment due to trauma or an illness such as polio. Chronic illnesses, also referred to as chronic health conditions, are those illnesses which tend to restrict physical activity. Epilepsy, diabetes, allergies and asthma, cystic fibrosis, heart disease, cancer and leukemia are common examples of chronic illness in young students.

An important point to stress at the beginning of this article is that physical disabilities are medically involving and do not affect a child's intellectual functioning. Academic progress may be slowed because of frequent absences from school, not by below average intelligence. Section 504 of the Rehabilitation Act of 1973 has broken the architectural and transportation barriers which in the past restricted physically disabled children to attending special schools. As a result of P.L. 94-142, more children whose only problems are physical disabilities are able to attend public schools.

Musical activities are important for physically disabled children because they provide, perhaps for the first time in their lives, opportunities to join with normal peers in a social activity. In addition, music can help develop feelings of self-esteem, improved self-concept and self-confidence in an environment which emphasizes success rather than placing emphasis on individual disabilities. To accommodate physically disabled children in the music setting it is necessary to adapt both the physical and musical environments.

ADAPT THE PHYSICAL ENVIRONMENT Section 504 of the Rehabilitation Act of 1973 requires that buildings be made accessible for the physically disabled by providing ramps, wider doorways, hand rails and non-skid floor surfaces. Accommodations which the classroom teacher can make are: 1) Provide enough room so that wheelchairs can easily maneuver throughout; 2) Make sure the chairs for students using crutches are secure as not to slide when students sit down or stand up; 3) Use chairs of the proper size and style to allow children wearing braces to be as comfortable as possible; 4) For children who must stand, make use of a standing table to provide support as well as an area for playing instruments; and 5) Some children confined to wheelchairs have lap tables on which instruments can be placed. Other tables in the classroom should be of such a height to allow the wheelchair to be pulled up close. For larger Orff-type instruments, it may be necessary to place these on low tables so that the proper height is achieved for playing.

ADAPT THE MUSICAL ENVIRONMENT In order to include physically disabled children in music activities, a few alterations can be made to allow these children to participate as fully as possible: 1) Plan activities which take the child's disability into consideration, by reducing the number of complex manipulation skills required to perform the activity, or by slowing a tempo somewhat; 2) Plan activities which aid in the child's physical development or maintenance. Movement activities can be used to develop coordination, spatial relationships, good locomotion patterns, and posture. An important point to remember is that physically disabled children must move in order to develop and maintain the

Palm cuffs, two-handed beaters, glove picks and other adaptive materials enable the physically disabled child to participate in instrumental activities.

functioning that they do have. Singing activities provide good exercise for children who are susceptible to respiratory ailments such as pneumonia; 3) Allow children confined to wheelchairs, braces or crutches to develop their own creative patterns of movement when participating with the group. For those who cannot move themselves, assign an ambulatory child or adult to push the wheelchair through the movement patterns. Children who are very physically involved can be carried or manipulated in order to experience movement and develop a sense of spatial relationships; 4) Do make use of a wide variety of adaptive materials that are available, such as palm cuffs, two-handed drum beaters, and glove picks, to enable the physically disabled child to participate in instrumental activities; and 5) Be Creative! Most adaptive techniques come from simple, everyday ideas!

CHILDREN WITH ORTHOPEDIC IMPAIRMENTS

Because of the wide variety of physically disabling conditions, those which involve orthopedic problems will be discussed first, followed by a section dealing with chronic illnesses.

CEREBRAL PALSY Cerebral palsy is a condition of neurological impairment resulting from lack of oxygen to the brain which may occur before, during, or after birth. The condition exists in various forms (spastic, athetoid, ataxic, depending on the location of damage to the brain), and accounts for the greatest number of physically disabled children in the schools. Spastic cerebral palsy is the most common type, which involves spasticity (rigidity) of one or more limbs, generally on one side of the body (hemiplegia). Athetoid cerebral palsy is the second most common type. This type is characterized by uncontrollable, jerky movements. The least prevalent of the three types is ataxic cerebral palsy. Balance and muscle coordination are affected by this condition. Although each of these types can exist alone, many cases of cerebral palsy are a mixture of the three categories, exhibiting various characteristics of each type. Range of impairment in any type can vary from mild, barely noticeable involvement, to severe disability.

Even though these children may not be able to express themselves, they do understand.

The effects of cerebral palsy may be noted in poor posture and head control in sitting, standing, and walking; poor balance, coordination and walking patterns; and the inability to bring arms forward, overhead, together at the midline, or to grasp and manipulate objects. There is also a tendency for the body to become rigid when voluntary muscle activity is attempted. When a cerebral palsied child attempts to use an unaffected hand, the affected side of the body may stiffen and the head turn involuntarily to that side. This difficulty makes eye-hand coordination a problem.

Singing and chants encourage the production of good tone and speech sounds through an appealing format.

In addition to the motor functioning problems caused by cerebral palsy, there may also be difficulties in speech and language, hearing, vision, perception, cognitive functioning and seizures. Some or all of these difficulties may be present to varying degrees and must be dealt with according to the problems each presents. Many cerebral palsied individuals have difficulties with speech and language. The impaired neurological process, rather than cognitive function, hinders the production and coordination of speech. Even though children may not be able to express themselves, it must be remembered that they can understand what is being presented.

If the cerebral palsied child's rigid arms or legs are manipulated slowly and gently, muscles can be temporarily relaxed in order to grasp an instrument or move more freely.

Singing and speech chants are good activities to use with the cerebral palsied child. These activities encourage the production of good tone and speech sounds through an appealing format. Rhythm and movement activities can gradually be paired with the vocal activities to encourage both speech and body control. Movement and instrumental activities which require bringing both hands together at the midline may be a way of remediating that coordination problem.

Even though cerebral palsied children may be rigid, if affected arms or legs are manipulated slowly and gently, muscles can be temporarily relaxed in order to grasp an instrument or move more freely. A physical therapist is the source to consult on the proper manipulation of cerebral palsied children.

MUSCULAR DYSTROPHY There are various types of muscular dystrophy which affect children during the first ten years of life. The most common type

affects boys, but there are forms which affect girls as well. Muscular dystrophy is characterized by a slow deterioration of the voluntary muscles spreading eventually to the muscles which control heart and respiratory functioning. Although the disease is considered to be terminal, there have been many medical advances which enable dystrophic children to live into adulthood.

During the early stages of the disease, symptoms that can be noted are falling, clumsiness in walking and climbing, and difficulty in rising from the floor. As ambulation progressively declines, a child may have to use crutches and braces for assistance in walking before being confined to a wheelchair. Later stages are characterized by fatigue, an inability to raise the arms, hold the head up, and sit erect. During the final stages, heart and lung functioning are affected. There is a susceptibility to respiratory ailments due to decreased lung strength.

Muscle activities for the child with muscular dystrophy should include movement and singing. The child should be constantly encouraged to perform as many activities as he/she possibly can in order to keep muscles functioning as long as possible. Singing activities can be utilized to maintain lung strength that is necessary in deterring lung ailments such as pneumonia. An instrument such as the organ, which requires little strength in pressing down the keys, may be used by a dystrophic child who formerly played the piano, or who has the desire to develop skills on a keyboard instrument.

SPINA BIFIDA Spina bifida is a birth defect in which the bones of the spine fail to form completely and cover the spinal cord. This condition results in slight to severe paralysis and loss of feeling in the lower body. Because of the loss of feeling, incontinence is a common medical and social problem, and urinary infections may occur. Also skin or pressure sores may result from braces or sitting too long in one position. The upper body usually feels and functions normally.

Spina bifida is usually accompanied by hydrocephalus, a condition whereby fluid accumulates on the brain, causing pressure and possibly damage. Through the use of a surgical shunting procedure, the fluid can be drained, reducing the chances of retardation to occur. Therefore, the child with spina bifida may have no learning difficulties.

Since there are no medical problems present in the upper body, normal singing and instrument playing activities are possible. The only accommodations to be made would be for the child's wheelchair. Movement activities are encouraged to help develop gross motor and ambulation skills.

RHEUMATOID ARTHRITIS A form of arthritis generally considered to affect adults, but which is also common in children, is rheumatoid arthritis. It is a chronic condition which attacks the joints of the body but may involve organs such as the heart, lungs, liver and spleen. Eye disease is also commonly associated with this condition and may impair vision skills. The most common symptom is swelling and stiffening of the affected joints. Inflammation of the eyes, skin rash, and stunted growth may occur as well. Forms of treatment for this condition are drugs, heat, physical therapy and aspirin. Splints, braces and casts may also be used to retard inflammation and to keep joints from becoming frozen.

Gross and fine motor skills and range of motion may be affected depending on individual involvement. Movement is recommended to keep joints mobile, but never when it is obviously uncomfortable for the child. Children who are afflicted with crippling of the hands or arms may make use of adaptive devices to enable participation in instrumental activities.

SKELETAL DEFORMITIES, AMPUTATIONS, PARALYSIS Adaptations in music activities are possible for children who have been born without limbs or extremities as in the case of skeletal deformities, for those who have had amputations due to injury, infection or disease, and for those who have lost the use of limbs as a result of paralysis. Children fitted with prostheses (artificial limbs) usually adapt to these easily and require little, if any, modifications in the music setting. Those with paralysis, however, must compensate for their loss of function by developing skills with other parts of the body. As in the case of all other types of orthopedic disabilities, movement activities are encouraged. Motor activities which employ bilateral functioning to discourage habitual use of the unaffected side of the body are good for these problems.

Children with muscular dystrophy should be constantly encouraged to perform as many activities as they can—especially in movement and singing—in order to keep their muscles functioning.

Normal singing and instrument playing are possible for the child with spina bifida.

Adaptive devices help children with arthritis to join in music activities; movement helps to keep their joints mobile.

Motor activities which employ bilateral functioning are remedial to children who favor their "good" side.

By making some modifications in playing techniques and equipment used, instrumental activities are possible and independence can also be developed. Many rhythm and percussion instruments can be played easily by a child who has the use of just one hand or arm as long as the instrument being played is secured as not to slide while the child plays it. Instruments such as the autoharp and guitar may be strummed by one hand or by holding the pick between the teeth. The guitar can be retuned to the pitches which harmonize a particular song so that only one hand is needed to strum. Keyboard music can be refingered for the child's functioning hand. Wind instruments can easily be supported by stands and other adaptive devices to accommodate one-handed playing.

CHILDREN WITH CHRONIC ILLNESS

Children afflicted with chronic illness generally have no problems involving intellectual functioning, but because they are frequently incapacitated by illness, they are behind other children in physical, educational, and social development. Because they have achieved little success in life, self-esteem is lacking and new situations present additional skepticism and self-doubt. Certain common emotions and behaviors emerge among children afflicted with chronic illness.

The predominant feeling is anger, expressed both verbally and non-verbally toward parents, physicians, teachers, siblings, and peers. The basic anger is "Why me?" and the child's non-verbal hostility is usually directed towards the authority figure in a given situation (i.e., the teacher at school). The child feels different while longing to be like his/her normal peers. Envy is another frequently displayed emotion. Chronically ill children tend to envy anyone, other children as well as adults, who do not have the disease that they do. Guilt and anxiety are often expressed as an attempt to defend the feelings of anger and envy. Often, these children feel guilty about the increased attention given them that is not afforded their normal peers. In addition, feelings of fear and sadness are typical among children who must be hospitalized frequently or who are terminally ill. This applies also to the child who has muscular dystrophy. Although this disease is orthopedically disabling, it is also terminal.

It is important not to focus on what makes these children different from their classmates, but rather how they can be a contributing, valuable member of the group. Movement activities provide opportunities for the child to express his/her own unique way of moving, according to the limitations set by his/her condition. Musical improvisation, particularly with Orff instruments allows children to express the difficult emotions that they experience. By being part of a group, they may be able to feel joy, belonging, security, and develop a creative means of self-expression.

Explanations of some of the most common chronic illnesses affecting children follow:

EPILEPSY This condition, caused by an excess of electrical discharge of nerve cells in the brain, is prevalent among children with neurological impairments and brain damage. However, children without neurological dysfunction may also experience epileptic seizures. Seizures can be controlled through medication such as Dilantin so that they occur infrequently.

There are three basic types of seizures. Grand mal seizures are characterized by loss of consciousness, falling, convulsive movements, labored breathing and drooling, and may last up to several minutes. The child may be confused or drowsy afterward and should be given an opportunity to rest. Petit mal seizures by contrast, are barely noticeable. The seizure lasts only a few seconds and some children may have a hundred or more seizures a day. The child may look as if he/she is daydreaming or staring off into space. There may be a tendency for the eyes to roll back and the eyelids to twitch. The child may not even be aware that the seizure has occurred and will continue an activity from the point where he/she was before the seizure. It is important to be aware when children experience seizures so that they do not miss important information or directions. The third type of seizure, the psychomotor, affects both motor and mental functioning. These seizures can last from a few minutes to hours, at which time a child may be confused, engage in purposeless activity, and experience fear,

Musical improvisations can help chronically ill children express the feelings they naturally experience: anger, envy, guilt, anxiety, fear, and sadness.

anger or rage. A child should rest following a psychomotor seizure.

Seizures may occur in the classroom, at which time the other students should be aware of the problem and understand that there is nothing to fear. Three important points to remember when a child has a seizure are: 1) Move objects and people out of the area around the child; 2) Place a soft object such as a handkerchief between the side teeth, if the mouth is open. If it is not, do not force the mouth open; 3) Do not restrain the child's movements in any way.

DIABETES Diabetes is a condition in which the body does not produce enough insulin to utilize sugar. Treatment is a controlled diet and, often, medication (e.g., insulin). The condition is usually not obvious in the classroom, requiring no restrictions in activity, however in rare instances, reactions may occur. Insulin shock, due to having too much insulin in the body, may be initially characterized by extreme hunger, excessive perspiration, trembling, and dizziness. The child may need a carbohydrate such as candy or sugar to correct the condition. Diabetic coma, which is more rare, occurs when insulin is needed. Symptoms of its onset are nausea, vomiting, extreme thirst and labored breathing.

ALLERGIES AND ASTHMA Allergies to various foods and substances may cause sneezing, watery eyes, runny nose, and itching. They are generally controlled by diet, medication, and avoiding the allergen. Children with allergies do not need to restrict physical activity, but may fatigue faster than other children. Asthma has been described as a severe allergy resulting in labored breathing, wheezing, excessive perspiration, and skin pallor during an attack. Although asthma is often caused by allergens, emotional stress and anxiety may aggravate the condition as well. A child experiencing an asthma attack should be kept calm and quiet. Physical exertion and playing a wind instrument may be difficult during periods of asthma attack, and are not recommended until the child is able to breathe more normally.

CYSTIC FIBROSIS Cystic fibrosis is an inherited childhood disease characterized by functional failure of glands that secrete mucus and digestive ferments. The disease involves lungs, liver, pancreas, and other organs. Breathing is usually labored and somewhat uncomfortable. Movement activities and playing wind instruments may be difficult for the child who has cystic fibrosis.

HEART DISEASE Children who suffer from chronic heart disease (those who have had open heart surgery to correct heart defects or have developed heart dysfunction) may have to limit strenuous movement activity. Although they may be taking medication for their condition, regular music activities such as singing and instrument playing should pose no problem.

CANCER AND LEUKEMIA Cancer is the rampant growth of abnormal cells which may occur in any part of the body. Leukemia is a malignancy of bone marrow. In children, the condition often results in fatigue, weight loss, joint pains, and excessive bruising. Depending on the nature, location and severity of the cancer, two of the most common methods of treatment used are radiation and chemotherapy. Children receiving these treatments are usually confined to the hospital on a short term basis. Chemotherapy causes severe nausea and loss of hair. Hair loss may cause self-consciousness on the part of the child. Obviously, much emotional support is necessary.

Children with orthopedic impairments and chronic illnesses, as described in this article, are all capable of making music and enjoying vocal, instrumental and movement activities. Through musical activities, such children can improve or maintain the physical functioning they do have, and express the negative feelings that can accompany physical disabilities. In addition to these benefits, music can provide a means for physically disabled children to take an active part in a group, allowing them to have much needed positive social experiences. Educators aware of the potential of music to aid in the emotional and physical growth of these children will find that simple adaptations in teaching methods and materials can enable them to provide enjoyable and therapeutic experiences in music for their physically disabled students.

Epileptic seizures may occur in the classroom, at which time the other students should be aware of the problem and understand that there is nothing to fear.

Children with diabetes do not need to be restricted in activity.

Physical exertion and playing of wind instruments are not recommended for children with impaired breathing, such as those with cystic fibrosis or those having an asthma attack.

It is important not to focus on what makes these children different from their classmates, but rather how they can be contributing, valuable members of the group.

THE EMOTIONALLY DISTURBED CHILD AND MUSIC

PETER SIMPKINS

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Symptomatic behavior must be examined and understood in order to design the best teaching approach.

Emotional disturbance in children covers a wide and varied expanse. Infinite symptoms are constantly manifested, often representing such diagnostic categories as Childhood Schizophrenia, Early Infantile Autism, Childhood Psychosis, Personality Disorder and so on. Rather than define specific diagnostic classifications, the following definition of severe emotional disturbance is offered:

The term means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance: An inability to learn which cannot be explained by intellectual, sensory, or health factors; An inability to build or maintain satisfactory interpersonal relationships with peers and teachers; Inappropriate types of behavior or feelings under normal circumstances; A general pervasive mood of unhappiness or depression; or A tendency to develop physical symptoms or fears associated with personal or school problems. The term includes children who are schizophrenic or autistic. The term does not include children who are socially maladjusted, unless it is determined that they are seriously emotionally disturbed. (Department of Health, Education and Welfare, Office of Education, August 23, 1977)

Traditional approaches to education have often proven unsuccessful in teaching the emotionally disturbed child. Strictly verbal modalities often overwhelm such children. A multitude of defenses, which often appear to be inappropriate behaviors, present tremendous obstacles to the education and socialization of these children. It therefore becomes necessary to explore other methodologies when working with such a population.

Before the emotionally disturbed child is ready to receive, process and assimilate cognitive material, symptomatic behavior needs to be examined, in an attempt to understand what the emotionally disturbed child is telling us and how we can best approach him/her. Clearly, through the effective use of music, emotionally disturbed children can be dealt with on a wide variety of levels.

The primary purpose of this paper is to provide those individuals working with emotionally disturbed children a generalized overview of these children in an attempt to expedite the creation and facilitation of appropriate music programs.

PERCEPTUAL CHARACTERISTICS

Perhaps the first issue to be addressed should be perceptual characteristics of emotionally disturbed children. The human brain not only decodes sensory information turning it into a system of concepts, but establishes human plans and programs and forms a conscious control of human action (Luria, 1973). In order for this to effectively take place, normal perception of the environment must first occur. Realizing from the onset that emotionally disturbed children often demonstrate severe problems in perceiving sensory stimuli, this section will only address auditory perception.

All too often, emotionally disturbed children can be observed displaying what appear to be inappropriate responses to auditory stimuli; i.e., crying, screaming, whimpering, covering their ears (Rimland, 1964), attending to self induced sounds, teeth grinding, irritability or apprehension and fear of inconsequential stimuli, disregard of speech and ignoring loud sounds (Ornitz and Ritvo, 1968). Several theoretical explanations have been offered to explain such behavior. Ornitz and Ritvo (1968) state, "These behaviors indicate that the child is

experiencing heightened awareness or sensitivity to sound along with an inability to modulate the input, resulting in sensory overload or sensory underload." Rutter (1978) states that severely emotionally disturbed children are unable to habituate to familiar sound, the result being all sounds, old and new, effect their systems with equal force.

Through the use of microanalysis, high speed film and the detailed observation of it, Condon (1966) observed that in pathological behavior, notably schizophrenia, self dyssynchrony (defined as the absence of timing of movement "ensembles" occurring with the linguistic breakdown in the subject's speech) was observed. This is seen as one or more body parts being out of phase, or in a lack of coordination between two sides of the body. This was observed in the presence of, and in relation to, auditory stimuli. Condon also states that while normal children tended to ignore inanimate sounds, i.e., blocks dropped on a table, autistic children synchronized perfectly with them, and the normal tendency to synchronize with speech was absent or impaired.

Based on experimental literature and clinical observations, it becomes absolutely necessary to be aware of the auditory parameters within the teaching environment. Loud noises, vocal dynamics and multiple sounds need to be censored, or, when possible, controlled. Just as the classroom is visually and mechanically organized, so the auditory elements also must be organized.

So often, in the education of emotionally disturbed children, perceptual disorders are overlooked. Before such a child can develop cognitive skills, perceptual issues must be addressed. Breaking down auditory parameters, particularly as they apply to music, often helps the emotionally disturbed child to process larger chunks of complex sounds. Through the introduction and exploration of sound parameters, i.e., dynamics, accents, sound versus no sound, the child is more able to tolerate sounds as they randomly occur.

Since music serves as a primary auditory modality, the structured use of sound, particularly within a musical context, offers not only an expressive outlet but a means of acquiring the necessary receptive skills to function with increased productivity. Based on this alone, education in music can serve a variety of purposes.

MOTOR CHARACTERISTICS

Traditionally, the development of emotionally disturbed children has been viewed as a psychological process. However, upon close scrutiny, one can observe in many emotionally disturbed children, a poor sense of self in space, inadequate motor planning, impaired eye-hand coordination, inconsistent responses to sensory stimuli, the maintenance of primitive postural reflexes and poor balance, to mention only a few. Given these, as well as other contributing factors, the emotionally disturbed child's sense of self, or body image, can be viewed as the integration of complex psychological and physiological functions.

As related to learning, Piaget's "sensorimotor stage" focuses on the infant's body movements as the basis for learning (Ginsburg, 1969). The newborn is characterized as an active initiator of behavior, using his/her body movement to develop new and modified patterns of action. Kephart (1973) states that learning takes place through encounters with the environment. Supporting this, Gerhardt (1973) focuses on the role of movement as the underlying and essential component to learning. Body movement serves and directs man's perception, thoughts and achievement. These thoughts and perceptions, in turn, direct movement.

Much of the literature on autism refers to the child's lack of a sense of self and an unawareness of his/her own body as separate from others. Schizophrenic children are often described as having a distorted body image, lacking a clear sense of body boundaries and an integrated use of the body as a whole. This fragmentation, on a body level, reflects the lack of connection between the child's actions, thoughts and feelings.

When the process of making music is viewed as a multi-sensory experience, one of hearing, touching and seeing, musical tasks can be modified or developed to address perceptual, motoric and psychological issues.

The ability to sense one's self in space can be enhanced through the process

Emotionally disturbed children often demonstrate severe problems in perceiving sensory stimuli.

Movement serves as a primary source of information about the child's makeup.

of sound making. Localization of sound and tactile/kinesthetic stimulation help develop the child's perception and processing of his/her own auditory productions. Eye-hand coordination can be developed through the appropriate use of musical instruments. Starting with large instruments, such as a drum, working towards smaller, more intricate instruments, the child can be given musical tasks that heighten eye-hand coordination. Sensory feedback, both tactile/kinesthetic and auditory, serve as natural reinforcers and validation of one's self. Acquainting the child with auditory parameters, such as loud and soft dynamics in an organized manner, help facilitate more consistent and accurate auditory perceptions. Motor sequencing activities help the child develop the ability to plan motor strategies and at the same time develop auditory sequencing.

In an attempt to develop more effective motor skills, communicative and expressive behavior, cognitive development and perceptual organization, the child must be seen as a total being. Movement, therefore, serves as a primary source of information about the child's makeup. It is suggested that physiological development be incorporated into the planning of the emotionally disturbed child's music program.

SOCIAL CHARACTERISTICS

Developing social skills with severely emotionally disturbed children is obviously a complex endeavor. Many issues, such as impulse control, poor ego boundaries, physical and emotional withdrawal, communication disorders and perceptual handicaps all serve as roadblocks in the acquisition of more socialized behavior.

One to one relationships, at best, are difficult to establish. Until the child perceives a desire to interact, little can be accomplished. Group settings are equally as difficult to effectively develop and control. Within such situations one frequently observes children moving both physically and affectively, in diffuse directions. Anonymity is easily achieved. As a result, the classroom setting is often chaotic, with little sense of group focus.

It often becomes necessary to employ external structures in an attempt to realize any sort of effective group interaction. Rather than resorting to strict disciplinary measures, harsh reprimands or other negative reinforcers, it is suggested that those individuals working with severely emotionally disturbed children seek out an external structure that inherently contains its own organization and control.

An examination of music and its elements immediately indicates a completely organized system. Music demands time-ordered behavior. It provides experiences in self-organization as well as relating to others (Sears, 1968). Rhythm alone makes possible the temporal order of music (Gaston, 1968). Consequently, within a music environment, whether one chooses to participate or not, the individual experiences himself/herself either inside or outside the experience. The opportunity for self-awareness is heightened. Awareness of others naturally follows.

Group music settings enable the severely emotionally disturbed child to experience varying levels of social processes while simultaneously producing a tangible product. Self-expression, within a musical environment, often plants the seed for future interaction, both verbally and non-verbally.

EXPRESSIVE/AFFECTIVE CHARACTERISTICS

The emotionally disturbed child classically presents very individualized means of communicating. Nordoff and Robbins (1971) state the following: "The treatment of psychotic-autistic children is problematic, for it is extremely difficult to establish contact with them. They are unable to maintain communication with others. They exclude themselves or are excluded by the nature of their condition from the reality and content of human relationship."

Probably the most significant task in working with what appears to be a non-communicating child is to first establish a relationship, because such children frequently have failed to experience any sort of mutuality. Clearly, the failure to do so rests not only with the child, but with all others in the environment.

Group music settings enable the severely emotionally disturbed child to experience varying levels of social processes.

Unrealistic expectations, rigid training procedures and inappropriate methodologies only serve to drive such a child further away. The concept of communication becomes less and less desirable.

It therefore becomes the responsibility of those individuals working with the non-communicative child to acknowledge, accept and embellish the child's present level of functioning. Before any accepted communication system can be implemented, the child must have a desire to communicate. Interactional goals take priority at this level.

Musically, one is afforded ample means of acknowledging, accepting and embellishing the child's behavior. Musical material that accurately reflects the child's behavior can be implemented. Improvisations based on momentary behavior are particularly effective when executed correctly. Mirroring, both physically and verbally, indicates to the child that you are aware of his/her existence without making harsh judgements.

At this level of interaction, a primary concern is for the child to experience how it feels to be understood. Given this, the child begins to experience a certain amount of control over his/her environment. The process of communication becomes positively reinforcing within itself.

The next stage, or level, is to enable the child to make conscious choices. Having been carefully presented with a variety of musical options, the child, when ready, can begin to choose desirable musical elements for the purposes of making sound, exploring auditory parameters and ultimately communicating inner states. Unique and highly individualized communication systems can begin to develop. The long awaited expression of self has opportunity to emerge within a comprehensible context. Such a context may be very special, only between you and the child.

Lastly, we are faced with organizing the child's responses into some sort of recognizable context, particularly within a group setting. Here the child begins to learn that he/she is not an autonomous creature, and that acknowledging another's messages is also a major part of the communication process. Here, musical materials, more so than before, need to be highly flexible. The teacher must be prepared to insert individualized contributions into an overall structure. At the same time, the music must contain connective elements that create a cohesive force within what may appear to be a multi-faceted musical production.

COGNITIVE CHARACTERISTICS

Very little has been written regarding severely emotionally disturbed children's cognitive development. Learning, as with all children, occurs through developmental stages. However, severely emotionally disturbed children are frequently delayed within the learning process. Concurrent problems, both emotional and physiological, all contribute to developmental delay.

Cognition occurs on many levels and within different situations. Clearly, the classroom is not the infamous "Mecca" of learning. Teachers working with severely emotionally disturbed children must be prepared to turn all situations, whether in the classroom or not, into learning situations. The delivery of information must be sculpted into and through meaningful situations as they relate to the individual child. As in all other situations, the severely emotionally disturbed child needs to develop a conscious desire to learn.

The assessment of cognitive functioning is a difficult process at best. Most typically, severely emotionally disturbed children do not respond appropriately to standardized testing procedures, nor do they learn at a consistent rate. Frequent setbacks in the child's emotional development often retard learning. Normal academic expectations must be pushed aside.

It therefore becomes absolutely necessary for the teacher to deal with a multitude of situations as they occur both in and out of the classroom. The same, naturally, holds true within the music environment. There is little reason to believe that severely emotionally disturbed children will respond differently in music than in other settings. The very same premises hold true for the music teacher as well as the classroom teacher. Unless the music material is relevant and appropriate to the child's level of functioning, little success can be realized.

Unrealistic expectations and rigid training only serve to drive the non-communicating child further away.

Teachers working with severely emotionally disturbed children must be prepared to turn all situations, whether in the classroom or not, into learning situations.

IMPLICATIONS FOR MUSIC

All musical behaviors, whether they be vocal, instrumental or rhythmic movement, represent extremely complex functions. Beyond this, healthy musical behavior serves as a clear indication of adequate integration of environmental, social, psychological, physiological and cognitive processes. Therefore, observation and assessment of atypical musical behavior can help educators to identify problematic areas in order to more effectively develop and implement educational and treatment programs.

Although the music teacher is not a physician, physical therapist, speech therapist, psychologist, etc., he/she is able to effect progress within all areas of the child's development through the making of music and its inherent rewards.

RECOMMENDATIONS FOR TEACHERS

1. Develop a basic working knowledge of normal child development.
2. Always be attuned to atypical development.
3. Acknowledge all environments where learning may occur.
4. Utilize the child's strengths and weaknesses in the development of goals and methodologies.
5. Explore traditional and non-traditional methodologies and theories, both within and outside of your discipline.
6. Recognize that failure of the child to progress in easily identifiable ways does not necessarily indicate a lack of progress. Progress occurs within very subtle levels and is frequently painstakingly slow.
7. Take advantage of the inter-disciplinary process whenever possible.
8. Never forget that your contributions to the child's development are as valuable as any other team member's.

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OPPORTUNITIES FOR GROWTH: MUSIC IN THE EDUCATION OF SENSORY IMPAIRED STUDENTS

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Music can move sensory impaired students beyond themselves and beyond their usual functioning level.

As long as music is considered to be an aural phenomenon and is taught as such, the visually impaired student is on equal footing with his or her sighted classmates.

Vision, like personalities and bodies, is completely individual and can even change within the individual for a variety of reasons.

Whether your students' senses are fully functioning or there is some degree of impairment in their ability to see or to hear, music offers equal opportunities for enjoyment, learning, and growth. The concept of "the music child" originated by Paul Nordoff and Clive Robbins (1975) refers to that inborn affinity that many children feel for music. It is a clearly perceivable though difficult to describe phenomenon; rhythm, melody, harmony, and tone color touch such children deeply and they respond with obvious commitment and understanding. This response springs forth from "beyond" any handicapping conditions they might have. Neither retardation, disturbance, physical deficits nor deprivation can spoil the emergence of "the music child." Whether the response manifests as virtuosic skill or as a whole hearted laugh amidst catatonia, the investment in the music is the same and it is the music which moves such children beyond themselves and beyond their usual functioning level.

Considering this, one can see why music is so important in the education of all students, including those focused upon here—the visually and hearing impaired. The two sections of this article should be considered separately and as beginnings. It is left entirely up to the reader to take these ideas and fit them to specific personalities and circumstances. The author understands that many visually impaired and hearing impaired students also have other physical, mental, or emotional handicaps and invites the reader to synthesize this material with that found in other chapters in order to meet the needs of the multiply handicapped child. Therefore, no such correlations will be attempted here, only discussions of music in the education of visually impaired and hearing impaired students.

VISUALLY IMPAIRED

The state of Pennsylvania's standards for special education describe students who belong in this category as those who have "a visual impairment which adversely affects (their) educational performance." The purpose of this article is to point out that, through sensitive teaching, involving a few specialized techniques, procedures, and materials, music can be an area in which the visually impaired are constructively affected in their educational performance. In fact, as long as music is considered to be an aural phenomenon and is taught as such, the visually impaired student is on equal footing with his or her sighted classmates.

There is no reason why a visually impaired student free of other disabilities cannot be mainstreamed into a regular music classroom. During the 1979-80 school year 2,652 of Pennsylvania's 2,983 visually impaired students attended public schools. What do these students need in their "least restrictive" musical environment in order to gain the most from it? First and foremost, they need to be understood. Vision, like personalities and bodies, is completely individual and can even change within the individual for a variety of reasons. There are many causes of blindness, occurring before, during or after birth; even two children with the same causative factor of their impairment may have very differing abilities to see. Their visual field may be blocked or fuzzy in certain circumstances and to varying degrees, or their vision may be limited to the perception of light only. While biological factors affect the child's eyes, social factors influence the use of the eyes or the rest of the body in compensation. For example, if children gain a great deal of attention directed toward their disability, blindness will be

reinforced and adaptive abilities stunted. On the other hand, if visually impaired children are raised in a social environment in which their disability is of no advantage and they have the physical coordination and mental ability to develop keen compensatory skills, they will do so, and may appear to have far more sight than they in fact have. Devices such as glasses, monoculars, etc. can further aid visually impaired students.

Environmental factors will have their effect as students maneuver skillfully in familiar surroundings or read with ease the page that is well lit. Some environmental factors are less obvious than those exemplified; such as, some partially sighted persons can see the images on color television more clearly than on one that is black and white. All of these factors affect the student's ability to see, adapt, orient, move and learn in completely individual and circumstantial ways. We can learn about our students' ability to see by watching them maneuver their bodies and manipulate objects, by listening to their questions, and by asking them to describe their perceptions in various situations.

An important step in understanding the visually impaired student is that of doing away with common misconceptions about blind people. The most common of these is that all visually impaired individuals are musically talented and especially interested in developing their musical abilities. This is not true. However, like most misconceptions, the notion does stem from a reality, which is that many visually impaired students do love music and do well in it when compared with sighted children their age. In sighted children, sensory attention is divided between visual and auditory information. In the blind child, this sensory attention is focused entirely on what is heard. These children are dependent on their hearing in a way that those who see can hardly comprehend. Considering this, it is not surprising that visually impaired students would have a head start in the aural art form naturally making it an area of particular enjoyment for them. Particularly detrimental is the idea that musical ability in blind children should be geared only toward professional profit. While it is true that music is an area in which the visually impaired student may excel, the aim of their music program should be the same as for all other students, i.e., "the education of human feeling through the development of responsiveness to the aesthetic qualities of sound" (Graham, 1975, p. 79).

Although the goals of the music education program will not differ for the visually impaired student, the outcomes may. Since music is an area in which this student is not disadvantaged and may in fact, be able to excel, involvement in it can increase the student's self-esteem, body image, confidence in movement and in social relations. Growth in these very fundamental and vital areas is a natural byproduct of an effective program in music education for the visually impaired student.

CREATING A STIMULATING "LEAST RESTRICTIVE" MUSICAL ENVIRONMENT As one begins to work with visually impaired students and to observe their needs, simple but helpful adaptations become obvious. Partially sighted students may be able to see the chalk board for a demonstration by sitting or standing near it. Adjustable music stands can place music so that it can be easily read. Also, good lighting, especially that from a window, can help the partially sighted student read if it falls over the shoulder and onto the page. Large print textbooks and bold print music are available for use by this population. Equipment and displays should be labelled in large print so that they can be read by everyone. It will also help partially sighted students if the teacher is aware that they may actually have a more difficult time in music than their normal and totally blind classmates. This is due to the fact that partially sighted students have neither the normal students' ability to see nor the totally blind students' highly developed memory skills.

The "totally blind" child—having light perception or less—can easily be accommodated in the music room. Studies have shown that 85% of all teaching is done visually (Graham, 1975, p. 79). While music education may be naturally less visual, it should be much less in this case, since the experience is, for the blind child, totally aural, tactile and kinesthetic. Verbal explanations must be detailed, clear and constant.

Many musical concepts can be effectively internalized through their translation into body movement. For this, students can be encouraged to

There is a common notion that all visually impaired individuals are musically talented. This is not true.

Growth in some fundamental areas—self-esteem, body image, body movement, and social relations—is a natural byproduct of an effective program in music for visually impaired students.

Partially sighted students may actually have a more difficult time in music than their totally blind classmates.

For the totally blind child, the music experience is solely aural, tactile and kinesthetic.

conduct their peers, using simple movements initially, working toward a standard conducting format. These movements can be learned not only through verbal explanation but through the teacher's physical manipulation of the student's arms. For more subtle gestures, it is helpful to let the students place their fingers lightly on the teacher's wrists as the teacher conducts. Another example of one of the many ways a student can be encouraged to "feel" a musical concept is through the use of a Japanese abacus. Metrical (rhythmic) combinations can be set up on various levels of the abacus and felt as they are heard and learned. (Graham, 1975)

Students who cannot see can learn musical compositions using one or a combination of the following three methods: 1) playing by ear; 2) through the dictation and guidance of a patient teacher; 3) by using braille music. There are a number of "talking book" records available on music.

Braille music enables a blind student to learn independently but brings with it a number of challenges. The student who can use it must first be proficient in braille, since braille music involves the same symbols as braille words, using an entirely different code. Secondly, this student must have a background in music and an understanding of harmonic theory and musical markings, since signs for these and such additions as fingerings are interspersed through the music. Students with the ability to use braille music "hear" the music as they read it with their fingers in the same way that sighted musicians hear the music they read. The students also must have a great deal of patience since, for example, Beethoven's "Moonlight Sonata" fills 46 pages of music in braille. Blind students may notate their compositions using a "braillewriter" (typewriter for making braille signs) or a braille slate and stylus.

The process of teaching a student to read braille music involves the coordination and cooperation of both the music specialist and the braille specialists. Together, they can work to give blind students the opportunity to study and practice music in their own time and in their own way.

"Raised" music is also available for students who have learned how the notes, staff, and musical markings feel. This is particularly valuable for use with students who learned to read music before they became blind.

With this description of special materials and techniques, let it not be underemphasized that the visually impaired student's most important resource is the acceptance of his/her teacher. The teacher who recognizes music for what it is will encourage all students—sighted and visually impaired—to learn through their ears. The caring teacher will see to it that any textbooks used will be provided appropriately, in braille, large print, talking book or cassette form. The teacher will not be afraid to talk, to ask questions, and to find out exactly what special students need and will pair up students that can assist each other.

Having visually impaired students in a music class can be as much of a learning experience for the teacher as for the students; it can be a true education about the world of sound. For students who are visually impaired, music activities offer opportunities to listen, play instruments, sing, move and create; to work and learn in a realm where they are not handicapped by their "handicap."

HEARING IMPAIRED

The question is often asked, disbelievingly, "Music for me deaf?" The answer is to replace disbelief with understanding, excitement and ideas necessary to begin or expand programs in music for deaf and hard of hearing students. The nature of this disability requires a more in-depth discussion than that needed to promote music for visually impaired students.

Certainly, there are simple adaptations that can be made. Hearing impaired students should be encouraged to sit near the source of sound and their teachers should speak loudly, clearly, and in "lower" tones, checking often to see if they are being understood. Attention should be directed to one place at a time. Visual, tactile and kinetic approaches can be used, and wooden floors or tables will aid in the transmission of musical vibrations. (Graham, 1980) These are adaptations that will help on one level; however, on another level, it is the attitude of disbelief that deserves the most attention.

Music has been available to students in schools for the deaf in the form of

The attitude of disbelief in "music for the deaf" deserves attention.

"rhythms" programs since the turn of the century. These programs have been geared towards the development of speech and language skills. (Graham, 1975) Since teachers of the deaf are often primarily teachers of speech and language, the "rhythms" programs were and are important uses of the elements of music for learning. However, as pointed out by Clive and Carol Robbins in their book Music for the Hearing Impaired (1980), music also relates directly to "communication and thought, bodily expression and dance, a range of emotions, and the perception and recognition of sound patterns and forms," while offering a very natural means of "enjoyable activation and security."

Musicality, per se—"the ability to retain, recognize, and reproduce sound patterns and to associate them with emotions and with other aspects of experience" (Boothroyd in Robbins & Robbins, 1980, p. 22)—is a functioning of the brain, and, as such, has nothing to do with the ears.

Therefore, the need for and the power of music does not change for a person even though they are physically limited in their ability to hear. Music, for these individuals, can play an important role in the training and development of residual hearing by adding newer, fuller, more positive meaning to the aural experience. In order for this to occur, opportunities must be made available to deaf students (the younger the better) for MAKING music. They must have the chance to "discover" music and to develop their own unique relationship to it.

In order to facilitate music making experiences for deaf students and to motivate the use of their residual hearing to the greatest potential, it is important that one understands just what each child is able to receive in musical and audiological terms. Music educators should be able to assess their students' musicality through observation; regular educators can get a good idea of this by watching the level of interest and delight displayed when conditions afford the hearing impaired child a genuinely musical experience.

AUDIOLOGICAL CONSIDERATIONS The audiological considerations for music have been discussed in a remarkably clear and understandable fashion in the Robbins' book referred to earlier; the most salient features of this description follow. There are three aspects of hearing that will be discussed: sensitivity, discrimination, and recognition.

SENSITIVITY This aspect depends on the amount of hearing ability one has. "Normal" hearing individuals can pick up and tolerate sounds from 0 to 120 decibels (dB). The sound of a pin drop occurs at 10-20 dB, and a jet engine noise is about 120 dB. Speech tones occur in the 30-60 dB range; shouting is at about 80 dB. Persons with a "mild" hearing loss, have lost the 0-30 dB range. Normal speech tones are then, audible to these individuals and they develop speech spontaneously. These students generally attend public schools, not special schools for the deaf.

Five percent of the students at schools for the deaf have "moderate" hearing loss, 30-60 dB, so their speech develops spontaneously but imperfectly. High pitched tones must be louder for these students to hear them; low tones are more easily heard.

About fifteen percent of the students, in special schools have a "severe" hearing loss, 60-90 dB, rendering conversation inaudible. Hearing aids, by making sounds louder, can restore almost all of speech sounds for these individuals.

The majority, about seventy percent, of the students in schools for the deaf have "profound" hearing loss, i.e., 90 dB or more. With the help of hearing aids, they can acquire some speech but need to learn to read, lipread, and/or use sign language to develop their speech and language skills. These students depend on their aids entirely, and therefore experience musical sounds only as well as they can be produced by the aid.

The last ten percent of the hearing impaired population is totally deaf. Their experience of the auditory world is through their bodies—sometimes called "body hearing." Sounds vibrate on their skin, in their bones, and in the cavities in the head. Since the senses of hearing and touch are as closely related as those of smell and taste, totally deaf students perceive music through touch and resultant inner sensations and will delight in and respond to those vibrations which they can feel (Fahey and Birkenshaw, 1972).

Musicality, per se, is a functioning of the brain and has nothing to do with the ears.

Music can play an important role in the training and development of residual hearing by adding newer, fuller, more positive meaning to the aural experience.

It is essential that music educators teaching the hearing impaired understand exactly what type of hearing loss is present in each student.

What are the implications of these categories of hearing loss for the deaf student's relationship to music? Firstly, we must recognize that most musical instruments are louder than conversational speech and can be heard more easily, especially if they are played at the ear of the listener. Secondly, while it is true that hearing loss affects what can be received, it does not affect what happens to auditory or tactile-kinesthetic material, once received.

DISCRIMINATION The greater the hearing loss incurred, the poorer the discrimination resulting, as hearing aids only serve to make sounds louder, not more distinctive in quality. However, discrimination of duration (length) of tones has little to do with the ear and depends on activity of the brain. Therefore, rhythmic patterns may be understood just as well through touch as through hearing.

Discrimination of frequency (melody tones) is affected by hearing loss. Still, severely deaf students should, with training, be able to distinguish all the tones in a western scale. Profoundly deaf students need larger intervals (than half and whole steps) in order to distinguish between them. Totally deaf students do not apparently receive melodic information.

Discrimination of intensity (loudness)—used in musical phrasing, expression and contrast—may actually be heightened in persons with a hearing loss. If we divide the range of music into six levels, from extremely soft to extremely loud, severely hearing impaired students should be able to distinguish all six levels and the profoundly impaired will pick up two or three.

Discrimination of timbre (tone), i.e., telling one instrument from another, is a problem for some hearing impaired students that may be addressed by instruction involving students in touching the vibrating surface of musical instruments. To hear the difference between a violin and a flute, the loss must be severe or better. Profoundly impaired students should be able to tell percussive from sustained sounds.

RECOGNITION Refers to the ability to build an "internal model" to correspond with sounds or sound patterns. This ability resides in the brain and so it is fully functioning in deaf individuals. It is limited only by the amount of incoming material with which to build such models. Persons who establish these before losing their hearing (like Beethoven) retain the models regardless of their disability.

PROGRAMS Programs in music for the hearing impaired can work very specifically on problems such as "deaf speech" which typically drags and lacks inflection and rhythm, or the "deaf walk" which tends to be rather stiff. Most importantly, however, music programs should be offered to hearing impaired students for the same reasons of enjoyment and fulfillment that they are made available to "normal" students. As we have seen above, there is no audiological reason for their exclusion from such programs.

What should these programs include? Deaf students can participate in activities of singing, instrument playing, movement and dance, play and stories with music, musical auditory training, music reading, and acquiring musical knowledge. The most crucial element of a music program for hearing impaired students is that they be encouraged to learn by doing, i.e., by making music. In order to develop such a program, it is necessary "to find, adapt, evolve or write materials appropriate for the age level and present skills" of the students involved. (Robbins & Robbins, 1980)

SINGING The extent to which a hearing impaired child can sing a melody depends on several factors: the hearing loss, aural motivation, previous auditory training, previous music education and experience, the extent of his/her inborn sensitivity to melody, vocal awareness, skill and confidence. Some children, normal and deaf alike, can perceive melodies although they are unable to sing them. Therefore, in any one class there is bound to be a variety of levels of ability and interest in singing. Two types of singing activities will be discussed here: "freering" and the singing of songs with words (lyrics).

"Freering" frees and develops the voice without the demands of language. It arouses an awareness of singing as a communicative experience while

Musical instruments are louder than conversational speech and can be heard more easily.

Discrimination of rhythmic patterns is an ability that is unaffected by a hearing impairment.

The most crucial element of a music program for hearing impaired students is that they be encouraged to learn by doing, i.e., by making music.

"Freelsinging" frees and develops the voice without the demands of language.

It is suggested that students move to every song that will allow it, since the tactile and kinesthetic experience of music is most meaningful to them.

Instruments used in the classroom should be of high quality so they make the largest possible amount of sound and vibrations.

building vocal confidence and skill. To initiate freelsinging, students can be encouraged to feel their own and their teacher's "Adam's apple" as it vibrates in singing on "La." Students can vocalize while they blow into a reed horn (a simple horn producing one, clear loud note when blown) or a melodica with one note taped down. They can also be motivated to sing when given a microphone. Many children have seen singers on TV and will automatically sing into a mike. When singing itself becomes the motivator, the mike can be left aside.

Once singing is achieved, it can be tried on different vowels and syllables (e.g., "ba," "ma," "wa," etc.). Work can be done to strengthen and sustain tones. Laughing from the diaphragm (lower belly) is a good exercise to strengthen singing. Freelsinging can be carried on antiphonally (two parts alternating) and can progress into jingles and games involving rhythm, pitch range, (hi-lo), dynamics (loud-soft) and tempo (fast-slow). Children can be aided visually in their singing by drawing a line on the board as long as they are producing sound. Piano support is helpful as students work on pitches. Pentatonic (five-note) scales are recommended for this. Students can be encouraged to make "siren effects," gliding their voices up and down. This can be felt as up and down on the "Adam's apple" by placing 3 fingers on the top, middle, and lower part of the throat.

"In working for the singing of songs, a teacher is working in the deaf child's areas of greatest disability: auditory perception, processing and memory; voice quality; production of speech sounds; the learning and retention of language; and the expressive use of meaningful oral communication" (Robbins & Robbins, 1980, p. 51). This work can stimulate improvement in these areas and also of students' sign language, reading, and vocabulary skills. It can enable them to share in the social pleasure and cultural value of songs, especially in learning the songs that "everybody knows," such as "Happy Birthday." (Graham, 1975)

Therefore, it is both important and difficult to find suitable singing material. The Robbinses outline ten aspects of songs that can be used to determine their suitability; and the reader is strongly encouraged to read and use their excellent recommendations. Visual aids, again, are helpful in this area; including photos, sentence strips, and the like. It is suggested that students move to every song that will allow it, since the tactile and kinesthetic experience of music is most meaningful to them, and holds the key to understanding concepts such as meter.

Signing with singing is highly recommended. The kinetic memory of signs helps students with the song's structure, meaning, sequencing, and words. When signing songs, every word should be included except when it is awkward. Idioms should be signed as such, and fingerspelling avoided. Signs can be created for the song, but it is important that the students understand which meaning is intended for a particular sign. Signs can be rhythmically emphasized to help younger children (e.g., for the sign "afternoon," the top arm can be tapped down three times, one for each syllable of the word "afternoon"). The "Signed English" method of signing each word allows for exactness and supports the learning of language. American Sign language (ASL), being a language with its own vocabulary and grammar, is more suited to expressing the meaning of a song more freely. A balance between the two can result in well-signed songs. When the singers' faces and bodies follow the dynamics and meaning of the music, signed songs are very beautiful.

INSTRUMENTAL ACTIVITIES Through instrumental playing in the classroom, hearing impaired students can learn to support, contrast, or answer others' playing, and through these activities, gain a sense of "ensemble." Not only is this personally and socially rewarding, but it avails students the opportunity to synthesize motor techniques and visual activities and auditory monitoring. Even if the totally deaf child is joining in only through careful watching and counting, he or she is coming very close to "auditory thinking" through the experience. (Epley, 1972)

Instruments used in the classroom should be of high quality so they make the largest possible amount of sound and vibrations (toy instruments have a "dead" sound with fewer vibrations). Instruments that are high pitched and/or soft-sounding, such as finger cymbals and triangles, are not recommended. Rhythm instruments, "Orff" instruments, resonator bells, autoharps, a variety of drums and

reed horns are good, basic instruments to have in the classroom. It is advisable to have as large a variety as is possible.

Scores charting the instruments to be used in a piece of music are helpful in keeping students focused and aware. Simplified pictures of the instruments themselves or of animals (e.g. where a cat signifies a drum beat) can be used as notes that children can read.

Hand bells also can be used effectively to create a sense of close musical teamwork and to promote growth in many other areas. Charts can be drawn in regular music notation with each tone being a different color. Students can sing their parts before playing them to internalize even more. As they progress, standard notation can be substituted.

In addition to these classroom experiences with instruments, hearing impaired students can benefit from instrumental instruction. Like their hearing classmates, ability to succeed on an instrument depends on good quality teaching, positive support of others (especially at home), and lots of practice. Unlike their hearing peers, deaf students have not absorbed thousands of hours of music, and so they don't have the normal student's common knowledge of familiar songs, styles or usages of the instrument. Consequently, this familiarity will not be the motivator that it is for normally hearing students.

Hearing impaired students must wear their aids while they practice and strive to develop their "hearing minds" so that playing is musical, not mechanical. If possible, supervision during practice can help these students to avoid practicing mistakes. Memorization should be encouraged, as well as bodily internalization of the basic beat (foot tapping) so that music is more and more an inner experience. Intonation can be a problem in instrumental ensembles of hearing impaired students. The "Korg" or another visual type tuner is recommended. (Robbins & Robbins, 1980)

The piano is an instrument that can be learned by hearing impaired students. Piano pupils should be allowed and encouraged to develop their own style of learning, incorporating the use of hands, eyes, ears in whatever fashion is most personally satisfying and effective. String instruments can be used by students with smaller hearing losses. The flute and related recorder and tonette are most difficult for this child since they are so high pitched. The clarinet, oboe and bassoon are easily heard, felt and understood. Brass instruments can be used by hearing impaired individuals with much pleasure and success. Other than the french horn, brass instruments are recommended because the vibrations are easily felt in the tones directly on the lips. Percussion instruments are, of course, natural choices for use by deaf students since their rhythmic sense is entirely free from impairment. (Graham, 1975)

Hearing aids are of utmost importance with regard to instrumental playing and should be an area of knowledgeability for all teachers involved. Aids can be tested in the beginning of each class period through the use of a special stethoscope. Room acoustics should allow for enough reverberation to fill the room without loss of clarity of sounds made within.

BODY MOVEMENT AND DANCE Throughout history and cultures, music and dance appear together. Movement in sound (music) and movement in space (dance) have identical roots. Many hearing impaired students enjoy dancing. Wooden floors allow them to feel the music's vibration more clearly, as does emphasis on the bass frequencies. Any hearing person who has suffered the bass of a neighbor's stereo or felt the jolts of the pounding bass and rhythm on a disco's wooden dance floor can easily understand how these accommodations bypass the ear.

Rhythm is the key element in a music program for hearing impaired students. It begins in the body, with the heartbeat and respiration. We experience our own natural rhythms and should encourage students to do so. Later, they can be guided into a specific time structure as part of a musical experience.

All aspects of rhythm should be experienced and clarified bodily by deaf students—the basic beat, phrasing, tempo, meter, syncopation, accents, repetition, and patterns. Instruction in dance should always include a warmup of the various body parts. After or as part of this, students can experience movement through games, exercises, choreographed dances (folk, square, etc.), improvisation, or by creating their own movements/dances. This can be

Hearing impaired students can benefit from instrumental instruction.

It should be remembered that a tense body cannot begin to feel rhythm, and so a priority must be to consciously achieve and maintain a sense of relaxation.

Students can be motivated by the totality of a story to accept responsibilities, to work with others as a team, and to "rise to the occasion."

It is important that we praise the student's progress, effort, and attentiveness, not his or her hearing.

Written music can bring order and definition to the hearing impaired child's auditory and tactile-kinesthetic perceptions.

Having sensory impaired students in a music class can be as much of a learning experience for the teacher as for the students.

done with recorded or live accompaniment or with a variety of auditory signals. It should be remembered that a tense body cannot begin to feel rhythm, and so a priority must be to consciously achieve and maintain a sense of relaxation. Deaf students are often very good at imitating movement. From there, they can branch out into the above mentioned activities, involving locomotor movements (walk, run, jump, etc.) and nonlocomotor movements (bend, stretch, etc.). As students progress, they can be encouraged to name their movements, to work with imagery, to move expressively and to experience various levels, shapes, and qualities. Because of the sensory deprivation that deaf students have experienced, they may need to be guided through and taught about uses of the imagination and its linkage with movement/dance.

PLAYS AND STORIES WITH MUSIC Plays and stories can be created or used with music. Currently available "musicals" can be reconstructed and "essentialized" for the purpose of use with hearing impaired students. Musical stories are a beneficial and welcome addition to the music program because they involve students in many ways at once: simple movement, dance, mime, acting, formal speaking, speaking in character, narration, singing and playing instruments can all be involved within the framework of a good story. Students can be motivated by the totality of the story and its parts to accept responsibilities, to work as a team, to "rise to the occasion."

MUSICAL AUDITORY TRAINING Although activities in auditory training cannot and should not replace opportunities for music making, they can do much to improve the auditory awareness and skills of hearing impaired students. These activities let the students have a clear idea of the use of their residual hearing. They allow teachers to find out what their students can hear (and do), so that subsequent program activities can be planned to stress each student's abilities and strengths while providing a challenge. As facilitators of these experiences, it is important that we praise the student's progress, effort, attentiveness and not his or her hearing.

Activities can be devised on all levels, including opportunities to distinguish pitch, dynamics, tempo and/or timbre. Students can demonstrate their awareness of such distinctions through a variety of signals, usually made with their bodies.

MUSIC READING Written music can bring order and definition to the hearing impaired child's auditory and tactile-kinesthetic perceptions. It serves to reinforce and clarify concepts, expanding students' understanding of that which they hear or feel. Since our goal in music programs for the deaf is to engage them as much as possible, this visual counterpart of music is a natural inclusion, serving to absorb these students more fully and to enable them to progress, musically.

Several techniques of beginning notation, such as using color-coded notes, have already been mentioned. Very small children will be attracted to notation using simple pictures as animals or flowers. The notation should be appropriate to the age level of the students who will use it and it should be reflective of as much of the expressive quality of the music as is possible.

MUSICAL KNOWLEDGE The deaf student's experience of music should include as much cognitive material as can be made meaningful to him or her. This material can incorporate: the history, purpose, title or name and meaning of song or activity they are learning; facts about musicians and current performers; names and categories of instruments; names of notes and musical components; information about various styles of music and dance; various musical ensembles and musical terminology. Field trips to concerts can aid in promoting interest in these areas.

Musical experiences with hearing impaired students, as with those who are visually impaired, provide their teachers and "normal" classmates with another kind of special education. Whereas the blind teach us about the world of sound, deaf students teach us what is between and inside those sounds; within rhythm and vibrations we find that there is more to music than "meets the ear." Hearing

impaired students teach us to feel music inside, to perceive its patterns and changes in kinesthetic terms. Work with sensory impaired students in music is rewarding because of the power of music itself to transcend these conditions and to inspire participation and growth.

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APPENDIX

STANDARDS FOR SPECIAL EDUCATION

Section 341.2: Definitions Part b

... State standards for special education are in the process of being revised, however, those standards, current as of March 1981, are presented here for reference purposes.

STANDARDS FOR SPECIAL EDUCATION

Section 341.1: Definitions Part b

EXCEPTIONAL PERSONS Those persons evaluated in accordance with this chapter as being hearing impaired, mentally gifted and talented, mentally retarded, physically handicapped, learning disabled, brain damaged, speech and language impaired, socially and emotionally disturbed, visually impaired, or severely multihandicapped. These terms are further defined as follows:

- 1 **BRAIN DAMAGE** A moderate to severe injury to the brain, as identified by a neurological examination, resulting in severe behavior and learning disorders. Persons whose behavior and learning disorders are primarily the result of visual, hearing or motor handicaps or mental retardation, emotional factors or of environmental disadvantage are not brain injured. The term brain damage does not include the condition known as minimal brain dysfunction.
- 2 **HEARING IMPAIRED** A hearing loss ranging from mild (hard of hearing) to profound (deaf), which interferes with the development of the communication process and results in failure to achieve full educational potential. A person shall be assigned to a program for the hearing impaired when the evaluation and Individualized Education Program indicate that such a program is appropriate, provided that the evaluation includes a report by an audiologist and otologist.
- 3 **LEARNING DISABILITY** A deficiency in the acquisition of basic learning skills, including but not limited to, the ability to reason, think, read, write, spell or to do mathematical calculations, as identified by an educational and psychological evaluation. Persons who have learning disorders which are primarily the result of visual, hearing or other handicaps or mental retardation or emotional factors or of environmental disadvantage are not learning disabled. The term learning disability does not exclude the possibility that a learning disabled person may also exhibit such conditions as brain damage or minimal brain dysfunction. A person shall be assigned to a program for the learning disabled when the evaluation and Individualized Education Program indicate that such a program is appropriate, provided that the evaluation clearly indicates that the person can demonstrate average or above average intellectual functioning on an appropriate intelligence measure. The evaluation shall include an assessment of specific academic strengths and weaknesses.
- 4 **MENTALLY GIFTED** Outstanding intellectual and creative ability, the development of which requires special activities or services not ordinarily provided in the regular program. Persons shall be assigned to a program for the gifted when they have an IQ score of 130 or higher. A limited number of persons with IQ scores lower than 130 may be admitted to gifted programs when other educational criteria in the person's profile strongly indicated gifted ability.
- 5 **MENTALLY RETARDED** Impaired mental development which adversely affects a person's educational performance. A mentally retarded person exhibits significantly impaired adaptive behavior in learning, maturation and/or social adjustment as a result of subaverage intellectual functioning. The degree of retardation and the level of social and academic functioning, not deviant behavior patterns, shall be assigned to a program for the mentally retarded when the evaluation and Individualized Education Program indicate that such a program is appropriate, provided that no person shall be assigned to a program for the:
 - (i) educable mentally retarded unless his or her IQ score is lower than 80.
 - (ii) trainable mentally retarded unless his or her IQ score is lower than 55.
 - (iii) severely and profoundly mentally retarded unless his or her adaptive behavior is so severely impaired that education programming is oriented to behaviors which may be considered absolutely basic to higher levels of skilled performance. Individuals with an IQ score lower than 30 may be considered for these programs and shall be evaluated by a physician prior to assignment.
- 6 **PHYSICALLY HANDICAPPED** Orthopedic and/or other health impairments of sufficient magnitude to limit a person's classroom accommodation and educational performance. A person shall be assigned to a program for the physically handicapped when the evaluation and Individualized Education Program indicate that such a program is appropriate, provided that the evaluation includes reports from a physician and a certified public school psychologist.
- 7 **SEVERELY MULTIHANDICAPPED** Persons who are diagnosed as having two or more of the following severe handicapping conditions required for assignment to approved private schools (22 Pa. Code §171.23(F)).
 - (i) **BLIND** A visual handicap of a severe degree. Those persons in whom there is visual acuity of 20/200 or less in the better eye with correcting glasses or a peripheral field so contracted that the widest diameter of such field subtends an angular distance no greater than 20 degrees.
 - (ii) **BRAIN DAMAGE** Those persons who manifest severe behavior and learning disorders resulting from a severe insult to the brain as identified by a neurological examination.
 - (iii) **CEREBRAL PALSY** Those persons with severe bilateral, symmetrical, nonprogressive paralysis resulting from developmental defects in the brain, or trauma at birth who cannot carry on independently, the normal activities of daily living.
 - (iv) **DEAF AND SEVERELY HEARING IMPAIRED.**
 - (a) **DEAF** A person who has a hearing impairment which is so severe that the person does not learn primarily by the auditory channel, even with a hearing aid, and requires extensive instruction to develop communicative and learning skills. In order to meet this subclause, and evaluation of a person as deaf should include an examination by an audiologist and otologist and a

separate written report about the nature and degree of the hearing impairment.

- (b) **SEVERELY HEARING IMPAIRED** A person who is not deaf but who displays a pure tone average of 60 decibel or more loss in both ears. In order to meet this subclause, an evaluation of a person as severely hearing impaired shall include an examination by an audiologist and otologist and a separate written report about the nature and degree of the hearing impairment and an evaluation which identifies the person's other severe handicapping conditions. For the purposes of this subparagraph severe hearing impairment will be recognized only if it exists in conjunction with another severe handicapping condition.
- (v) **EMOTIONAL DISTURBANCE** Those persons who manifest a severe major affective psychosis which is characterized by a single disorder of mood, either extreme elation or depression that dominates the mental life of the person and is responsible for whatever loss of contact they may have with their environment.
- (vi) **MUSCULAR DYSTROPHY** Those persons who manifest a severe wasting away and atrophy of the muscles whereby they become non-ambulatory, lose muscle power and are unable to participate in normal activities of daily living.
- (vii) **SEVERELY MENTALLY RETARDED** Those persons whose adaptive behavior is so severely impaired that educational programming is directed to behaviors that require closely supervised simple self-help and very simple work skills requiring full dependence upon others. This term is used to describe the degree of mental retardation present when intelligence testing is lower than an IQ of 25 as measured on individual psychological tests with no consideration of the standard error of measurement permitted. Those with such adaptive behavior and measured mental ability will be considered for these programs and shall be evaluated by a physician prior to assignment.

- 8 **SOCIALLY AND EMOTIONALLY DISTURBED** A condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree: an inability to learn which cannot be explained by intellectual, sensory or health factors; an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; inappropriate types of behavior or feelings; a general pervasive mood of unhappiness or depression; or a tendency to develop physical symptoms, pains or fears associated with personal or school problems. A person shall be assigned to a program for the socially and emotionally disturbed when the evaluation and Individualized Education Program indicate that such a program is appropriate, provided that the evaluation includes reports from a board-certified or approved psychiatrist. No person shall be assigned to a program for the socially and emotionally disturbed for disciplinary reasons alone. Socially and emotionally disturbed children shall be psychiatrically reevaluated every two years.
- 9 **SPEECH AND LANGUAGE IMPAIRED** Communication disorders of impaired language, voice, fluency or articulation to such a degree that academic achievement is invariably affected and the condition is significantly handicapping to the affected person. A person shall be assigned to a program for the speech and language impaired when the screening by a speech clinician and the Individualized Education Program indicate that such a program is appropriate. Where appropriate, an evaluation by a certified public school psychologist or physician shall be performed.
- 10 **TALENTED** Outstanding talent as identified by a team of educators and professionals competent in the areas of art, music, dance, photographic arts or theater, the development of which requires special activities or services not ordinarily provided in the regular program. A person identified as talented shall be eligible to attend the Governor's School for the Arts.
- 11 **VISUALLY IMPAIRED** A visual impairment, which adversely affects a person's educational performance. A person shall be assigned to a program for the visually impaired when the evaluation and Individualized Education Program indicate that such a program is appropriate, provided that the evaluation includes an examination by an eye specialist and a written report of the nature and degree of the visual impairment.